The

Architectural Record.

To build up "a pile of better thoughts."—Wordsworth.

"And the worst is that all the thinking in the world doesn't bring us to Thought; we must be right by nature, so that good thoughts may come before us like free children of God, and cry "Here we are."—Goethe.

OCTOBER - DECEMBER, 1891.

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ARCHITECTURAL RESOURCES-No. 1.

THE NEW EDITION OF FERGUSSON.

RAYMOND LEE-Part II.

+ WITH 67 ILLUSCRACIONS +

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OUR ILLUSTRATIONS.

THE question has been asked, why are the illustrations in the ARCHITECTURAL RECORD not, in all cases, related to the text? For instance, it will be seen in this number, that illustrations accompany Professor Hamlin's article, "The Difficulties of Modern Architecture," with which they have nothing whatever to do. This incongruity and defect—so far as it is a defect—is, from the point of view of the managers of the magazine, unavoidable. Their position is this: the evil of "illustrated articles" is, that so frequently they are good for nothing but the illustrations; the text merely offers an opportunity to the engraver. In the long run even the most guarded selection will be forced to sacrifice something of literary quality for the sake of the pictures. Besides, in architecture, the field for selection—though wide—is not anything like as wide as that which the illustrated "monthlies" occupy. Very much that is worth saying on architectural subjects will not admit of illustration, and many things worth illustrating do not require verbal exposition. Which policy then shall be followed: make the magazine "illustrated" with such text as the pictures call for; or stick first of all to the text, giving it the primary importance and illustrating it only so far as it clearly demands illustration. The latter policy surely gives the more forcible and valuable publication —but as illustrations are in themselves articles for the architectural student, and as the latter policy would necessitate the use of only a very limited number of plates, the publishers of this magazine deem it advisable to supplement the illustrations which the text needs with others not specially called for by it. It would perhaps be strictly more logical to bunch these together in the middle or at the end of the magazine after the manner of the weekly architectural newspapers; but this arrangement would lack variety and in many other ways would be undesirable in a magazine. As it is, the reader readily perceives which plates are related to the text. Whatever confusion there is, arises only at the first glance, while there is expectation that the text and the pictures are keeping step with one another.

The numbers of the ARCHITECTURAL RECORD immediately to follow this issue will be of unusual value to the architect and of great interest to the general reader. Among the contents will be articles by E. A. Freeman, the English Historian, on "The Relation of the Romanesque Revival in America to Ancient Romanesque;" by Montgomery Schuyler on "Old Colonial;" by G. Lindenthal on "The Architecture of Bridges;" by L. De Coppet Berg (of Cady, Berg & See) on "Iron Construction;" by Nelson Black, "Proportion in Architecture;" in addition to articles by R. W. Gibson, De Lemos & Cordes, Professor Kerr, Fellow and Emeritus Professor of King's College, London; Barrister Fletcher, Jr., of London. Colonial Architecture in Maryland, the Architecture of Hildesheim, Germany, the History of the Use of Terra Cotta in America, Mosaics, Stained Glass, the Development of the Apartment House, Architecture in Great Britain at the present day, will also be treated of and amply illustrated, in addition to other matter.

ARCHITECTS desiring to submit pen-and-ink perspectives or photographs of their RECENT work for reproduction in this magazine should send them securely packed and addressed as below. The sketches or photographs will be returned within three weeks.

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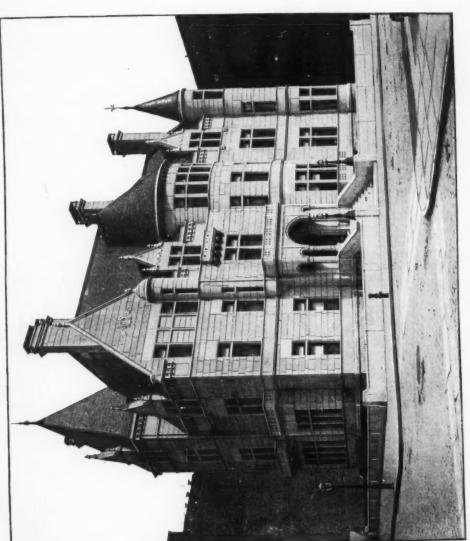


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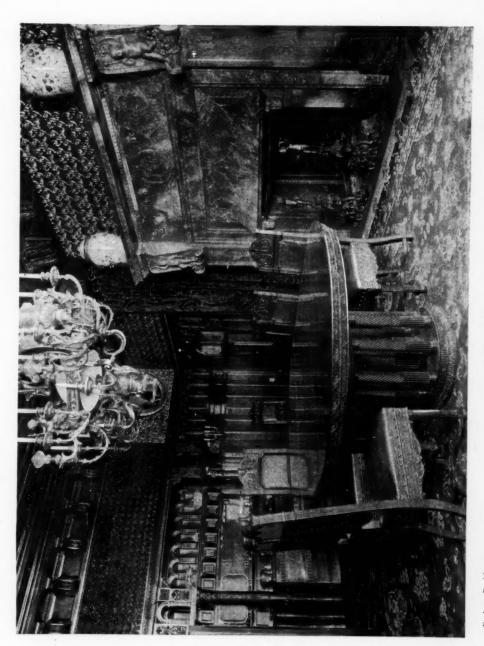
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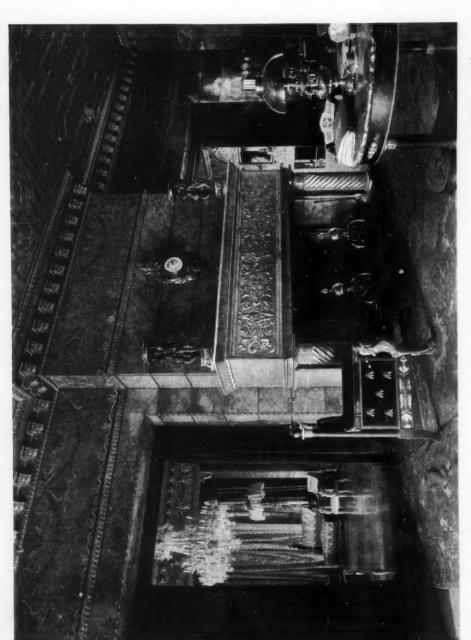
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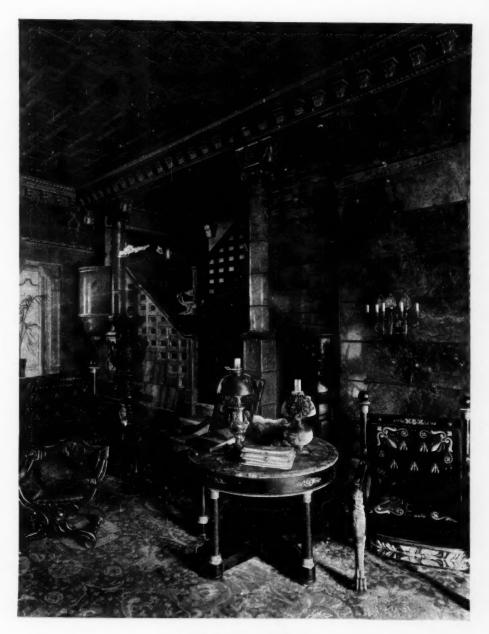
Rose & Stone, Architects.





DRAWING ROOM,

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Brokaw Residence.

STAIRCASE AND HALLWAY,

Rose & Stone, Architects.



SIBYLLA FATIDICA.

Henry A. Pegram, Sculptor.

Architectural Record.

VOL. I.

OCTOBER-DECEMBER, 1891.

No. 2.

ARCHITECTURAL ABERRATIONS.*

No. 1.-THE EDISON BUILDING.



"jumps to the eyes" in the contempla- feature "tristyle in antis." very eminent badness.

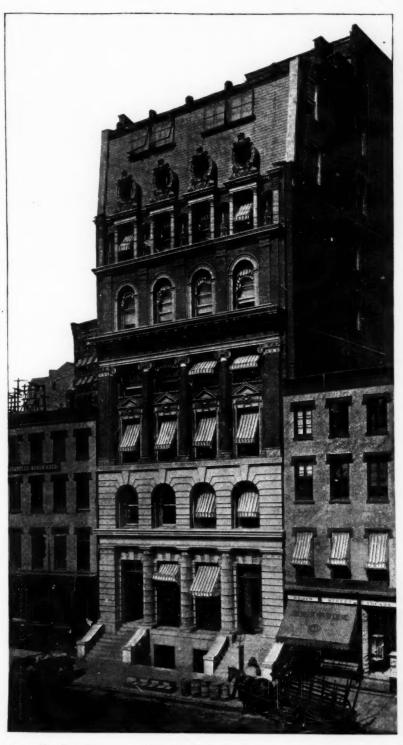
ANGER lurks in the that it is built of a different material superlative degree. Of than the other stories, for these two each of how many stories are of a bluish-gray limestone, things is one tempted or marble, while the stories above are to say that it is the of brown brick, with "trimmings" (the best or the worst of milliner's term is quite applicable here) kind, when he of cream-colored terra cotta. But, meets another thing of the kind that then, these two stories do not constimakes him congratulate himself that tute a basement in an architectural he did not yield to the temptation or sense. If they did they would be repent that he did. Bearing this in united in treatment and divided from mind, we shall not say that the Edison the superstructure. As a matter of building in Broad street is the worst fact, the first is divided from the second building in New York, or the worst much more emphatically than the commercial building in New York, or second is divided from what is above. even the worst of recent commercial The first consists of three columns, buildings in New York. We will con- loosely Roman Doric, banded and set tent ourselves with saying what can be against square piers, while the lateral established beyond dispute and what piers are left unadorned, making the tion of it, and that is, that it is of a detail is well enough, being such as any draughtsman knows where to In the first place it has no compo- get and how to copy. So far so good. sition. There are six stories and they But in the intercolumniation there is are set one upon the other, but they sprung from pier to pier a flat arch of have no architectural relation one to which the voussoirs are treated with another. The second, for example, is a ferocious vigor, as if they were much solider than the first, and the meant to carry a great wall. In fact fifth is the plainest of all. There is a they carry nothing at all but thembasement, and it is a basement of two selves, for the columns sustain a This is proved by the fact heavy entablature, and this truculent

^{*} We are making a collection of "Aberrations," and shall present one to our readers in each number of THE ARCHITECTURAL RECORD.

arrangement of flat arches is nothing of arches turned between pilasters. but the top of the sash frame. The arches are thin and weak, and the The entablature shows a heavily- pilasters flat and feeble. Comparatively moulded cornice of considerable pro- plain as this story is, there are too jection which separates this story from many things in it, and all the things that above. This second story is not are bad. The pilasters, for instance, bad in itself, though not particularly might have been omitted with much good either, and by its severity is advantage. They are too shallow to much more appropriate as a basement account even for the little shelf of a than the very much overdone story below. But above this is a projecting the main cornice of the building, and course much narrower, much less heav- it is more important in function and ily moulded, and of much less pro- less important in treatment than any jection than the cornice below, so that, other belting course in the building, except for the change of material, the excepting only the course that divides basement is much less sharply divided the basement from the superstructure, from the superstructure than one story which is the next most important in funcof the basement is divided from the tion and the next most unimportant in other. Moreover, this narrow course design. So far as any principle of design is the footing, the stylobate, for the can be detected in the front, indeed, large order that runs through the next it is to emphasize what is subordinate two stories, and an absurdly inadequate and to slur what is principal. The thin footing it is, and looks particularly shelf which is the crowning member absurd when it is compared with the of the wall is even more conspicuously the building.

cornice they carry. This is, in fact, heavy entablature of the order, to inadequate as a footing for the range which, in educated classic design, it is of dormers it carries than the shelf at always proportionate. The cornice of the top of the basement as a footing this entablature has more projection for the great order. In these dormers than anything else in the front, and the the designer lets himself quite loose entablature is the most emphatic hori-zontal member of the building. There are two stories above and three below, recent building we recall. The decounting the order as a single story, so tached columns that carry the lintels that the pleasant effect of this feature of the dormers and their superincumis to cut the building in two in the bent bulls'-eyes have an aspect at once Upon the whole, however, of feebleness and swagger that is the disposition of this order is more highly exasperating, while the treatrational than that below, for the order ment of the parapet wall between them appears as the structure and the wall is more exasperating still. Between inclosed as a mere screen. The pedi- each pair of dormers stands a niche ments of the lower included story do not, covered with an arch, of which the vouslike the flat arches of the basement, soirs are long thin tiles of terra cotta in pretend to be doing work or to be any- two tints, and in each stands a tearthing but window-tops. To be sure, bottle—positively a terra cotta tearthe wall would have looked better if bottle six or seven feet high. What all they had been left off, but one may this stuff has to do with the Edison buildsay that of pretty much everything in ing is as inconceivable as what it has to The order would have do with the art of architecture. The been much improved if its shafts aspect of the building is calculated to had been monoliths, for it is simply make the judicious grieve very deeply degraded when they are built up in and possibly weep, but for the lachryrounded bricks, and violence thus done mal exigencies of the judicious the to that respectable building material, tear-bottles should be ranged along while it is burlesqued by the ridiculous the opposite sidewalk, where their quarter columns that peer out from shapes would still make them very inbehind the piers that form the antæ of convenient to cry into. Above this the order. Then comes a plain story point nature is exhausted, and no won*We are making a collection of "Aberrations," and shall present one to our readers in each number of The Architectural Record.

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Broad Street, New York City.

THE EDISON BUILDING,

der. There is another story above the bulls'-eyes, lighted by skylights at the top of the mansard, of which the architect has apparently left the design to the glazier. All the same, they perform a function in a straightforward way, and it is really a satisfaction to look at them after all the pretentious nonsense below.

offensive is the second, while the building—as a whole, we were about to say, but it is not a whole—as a collection of things, is both ridiculous and offensive. To look at it one would say with entire confidence that the man who did it could never do anything good. As a matter of fact, he has done something good—something which has unity and

It remains to be added that he who sees the Edison building in photography instead of in fact sees it to the better advantage. The combination of color is distressing in itself. It is the more distressing because in the superstructure the weak color goes with the more important structural parts and thus assists the negation of design which is attained by the forms. The front, as we have said, is not an architectural composition. Its stories are so many shelves loaded with architectural details, some of which have been and may be again used in architectural works, while some are altogether unsuitable for such use. The only single story which is neither ridiculous nor

ing—as a whole, we were about to say, but it is not a whole—as a collection of things, is both ridiculous and offensive. To look at it one would say with entire confidence that the man who did it could never do anything good. As a matter of fact, he has done something good-something which has unity and quality and picturesqueness and charm. This fact converts the problem presented by the Edison building from one of architecture to one of psychology. We are inclined to give it up. Evidently the designer has failed to follow the injunction sometimes given by parents to inquisitive children. He has neglected to "use his thinker," and has trusted entirely to his "feeler," though how his feeling could have told him this was good is another baffling problem. Inasmuch as he has done something good, however, in considering this afflicting performance we gladly suppress what Mr. Swinburne has somewhere called-

"Our sad, bad, glad, mad brother's name."





CARVED PANEL IN THE RESIDENCE OF W. F. KINGSLAND, ESQ.

West 38th Street, New York City.

Brunner & Tryon, Architects.

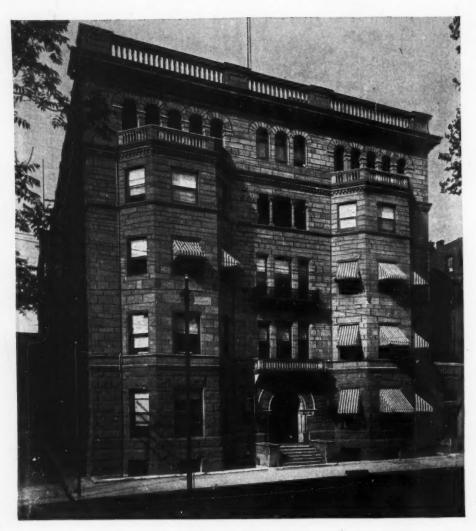
THE DIFFICULTIES OF MODERN ARCHITECTURE.



has very unequally affected the fine arts. While sculpture in methods principles remains essentially the same art as in the days of

Phidias, painting has been revolutionized by the discovery of new media of expression and new fields for its exercise. Oil- and water-colors, the scientific Ages, but also and even from that of treatment of perspective and of the principle of values, landscape-painting, and, to a certain extent, genre as well, are ferent materials and processes; it is peculiarly modern developments of the pictorial art. But it is in architecture that the changes have been most radical and far-reaching. Standing midway between the fine and the useful arts, architecture partakes of the nature of both; it is the finest of the useful arts and the most useful of the fine arts. It is, therefore, alike subject to those influences which affect the expression of sentiment in plastic form, and to those which concern the practical life conditions long since vanished, they and needs of society. In that strongly artistic period of Italian art which we tice only in the same way in which the call the Cinque Cento, we find architect- epics of Homer or of Dante have stood form, increasingly devoted to the pur- all subsequent ages. The fundamental poses of public and private rather than principles of composition, construction,

DERN civilization of religious life. As physical science advances and life becomes more complex on its material side, it is only natural that practical and utilitarian and requirements should become more imperative, relegating purely artistic considerations ever further into the background. This is precisely what happened in the case of architecture, which is to-day a different art, not only from that of the antiquity or of the Middle the early Renaissance. It is prosecuted under different conditions, with difcontrolled by different considerations, and is called upon to supply different requirements. Those who complain of the failure of modern architects to profit by those historic examples of their art which are the admiration of all men, ignore or forget how difficult of application are the principles these exemplify to the special conditions prevailing in modern work. Conceived in another age, for other uses, and under can serve as models for modern pracure chiefly occupied with pure beauty of as models for the study of writers of



DUQUESNE CLUB HOUSE.

Pittsburgh, Pa.

Longfellow, Alden & Harlow, Architects.

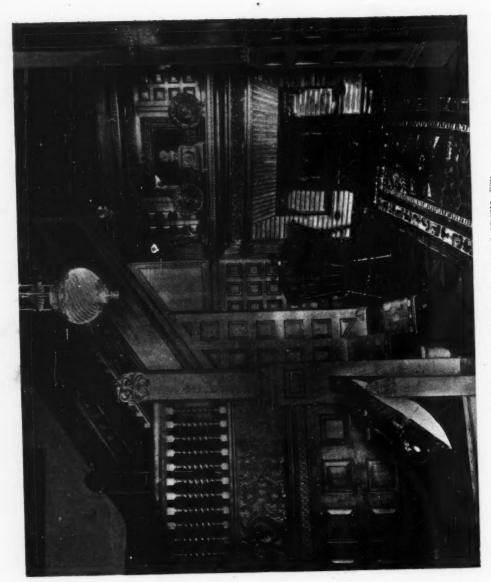
THE DIFFICULTIES OF MODERN ARCHITECTURE.

triumphs of the builder's art certainly illustrate in consummate fashion, and study and admiration. But to apply the lessons they teach to the wholly capable of discrimination and judgment appropriateness. has done or is doing, as they are conditions, requirements and limitations which prevail in modern practice. For this reason they fail to touch the true causes of the shortcomings they deplore, and instead of contributing to their cure they rouse futile and acrimonious discussion, bestow sweeping and una merited blame, and fill the public mind with mistaken notions and unfounded suspicions. It seems, therefore, high time to call attention to some of the real difficulties of the problem of modern architecture. Certain preliminary considerations will first be in order, which if trite, are nevertheless fundamental.

The first of these relates to the twofold nature of the art, to which allusion has already been made. Architecture has its origin in the material needs of mankind, and these must necessarily control its development. It has furthermore to deal with the stern laws of gravitation and of the strength of materials, to whose behests all its manifestations must be subordinated. In these aspects, then, it is purely utilitarian, and if it stops here, is not an art, but a science or a trade; it is mere building or engineering. It

design, proportion and ornament, these rises to the dignity and glory of an art only when it consults the demands of beauty and grace, seeking to reach the are therefore ever worthy objects of emotional side of man as well as to minister to his material wants. Mere fitness to an end is not artistic beauty, new conditions created by modern life nor even an element in it. Convenient is no easy problem. Conscientious and planning and stable, scientific construchighly-gifted architects have long been tion may exist in-nay, they frequently devoting themselves to this problem seem to demand-forms and combinawith varying success. If their failures tions wholly unpleasing to the eye. have been many and their triumphs The demands of use and beauty not infew, as some would have us believe, it frequently pull in opposite directions, is at least conceivable that the difficul- as every architect knows. It is a ties of the problem, and not the incom- sophism as hollow as it is common, that petence of the architects, may be the beauty consists mainly in fitness and cause; but upon the architects usually appropriateness. It is time that this falls the blame. The responsibility for fallacy,* based as it is on a truth, were the failure of modern architecture to exploded. "Beauty is skin deep" in reach the high level of past attainment, the sense that it relates only to external it is not wholly easy to rightly appor- and visible form and color, not to func-Many of those who have in tion and internal structure. A wholly recent times written on this and similar beautiful building or design may prove topics have shown themselves as in- entirely lacking in convenience and The two kinds of in estimating what modern architecture excellence-utilitarian and æstheticare independent of each other. It is, ignorant or insensible of the actual however, true that when they coexist in one design, so that the perfect structure serves at once the ends of use and of beauty, each enhances the other; and herein we find suggested the true purpose and function of architecture. It is to harmonize in one and the same creation, the independent and oft-conflicting claims of use and beauty, so that the very forms devised to meet practical needs in the most perfect manner shall also satisfy the human craving for beauty, grace, refinement. In the highest types of historic architecture the beauty we admire is inherent. It is a part of the building, an outcome of its whole plan and construction, which have been made to serve the ends of beauty at

*The fallacy of this proposition lies in the use of the word "beauty" in two different senses. The proposition that "beauty" consists mainly or largely in "fitness" or "appropriateness to an end" is true if by "beauty" we understand the sum-total of qualities which give pleasure to the contemplation of a visible object. But it is not true of beauty in the special and technical sense of grace or loveliness of external form and proportion, qualities which, as we have said, may exist independently of fitness and appropriateness. It is a fallacy which in its essence one encounters not infrequently in Ruskin, to apply to this second meaning of the word "beauty," the conclusions based, correctly enough, on the first. The pleasure we experience in things well-designed from the point of view of mere utility, is intellectual rather than exsthetic. That which arises from loveliness of form is æsthetic rather than intellectual. These emotions are different in kind.



Charles P. H. Gilbert, Architect. INTERIOR IN RESIDENCE OF THOMAS ADAMS, ESQ. Corner Carroll street and Eighth avenue, Brooklyn, N. V.

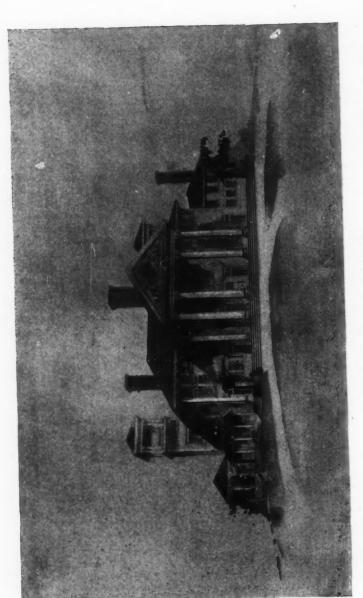
tical purposes for which the structure temporaneous use in different buildings, was designed. In engineering works, of forms borrowed or imitated from fitness, stability, and economy abso- distinct historic styles, thus finds its lutely control the design, grace and natural explanation in the intellectual beauty being sacrificed to these practi- spirit of the time, which in all branches cal considerations; while, on the other tends to archæology and eclecticism. hand, every design whose beauty is Whether this is or is not to be deplored, merely the adventitious grace of orna- and what its present tendencies and ment, or in which beauty is produced final outcome may be, are questions by only at the cost of convenience and no means to be answered off-hand. sound construction, drops at once into They may be reserved for future conthe category of bad architecture, how-sideration, as their discussion would too ever excellent, viewed merely as a far transcend the limits of this article.

decorative composition. litical, economic, intellectual and artis- earnest writers seem to lack. erudition and archæology place at the such productions. established precedent, consequent upon ure.* this vast widening of the field of selec-

the same time that they meet the prac- the mixture in one building, or the con-

In the third place it should be con-It is beside our purpose to enter at sidered that whoever would criticise present into the question of the modern modern architecture must carefully use of styles, further than to call at- distinguish between shortcomings tention to the real meaning of the term. rightly chargeable to the architect, A style is nothing but the customary and those which exist in spite of him and characteristic system of construc- and constitute the conditions under tion and ornament prevailing in a which his work is done. This requires given time and place. It is the out- a practical acquaintance with the procome and product of all the social, po- fession and its personnel which some tic conditions that govern the age and critic must know what are and what people that practice it, and can change are not representative modern works. only as those conditions change; that He must separate tendencies that is, in the same way with languages and have "run out," and shortcomings literatures. No man, nor any set of men, that are fast disappearing, from those can create a new style, nor has there which are on the increase. He must ever been in history any sudden change distinguish between the creations of in styles, except as the consequence of acknowledged leaders in the profession the overthrow of one civilization by and the mass of commonplace work another. Even the Renaissance in Italy emanating from the nobodies who brought no sudden revolution in archi- have neither taste nor training. It is tectural forms. It is surprising to see of course possible to draw instructive how far back into the Middle Ages the lessons even from this lowest stratum beginning of Renaissance architecture of the builder's work, but these lessons can be traced. Each so-called new style do not pertain to architecture, and the builds on what has gone before, in the failings they set forth should not be near or remote past. As time goes on, imputed to any one but the authors of The critic must architect's disposal increasingly rich also understand the relations of archimines of historic form, which it is his tect and client, and the limitations right and prerogative to draw upon imposed by local conditions as to freely. But with this greater range of materials, space, expense, the demands choice comes the greater difficulty of of commerce and the degree of public choosing and combining, while a thou- education and culture in the comsand influences beyond the architect's munity. It is the failure to make control operate to hamper the free ex- these and similar essential distincpression of his own artistic imagination, tions and to institute just compari-The difficulty of rational and artistic sons that vitiates some of the most design grows with the relaxation of recent writing on modern architect-

^{*}See the "Popular Science Monthly" for June and December, 1890, also the "New Englander" for May, 1891.



RESIDENCE OF J. F. D. SENIER, ESQ.

Westbury, L. I.

James Brown Lord, Architect.

main question before us.

It becomes evident, in the first place, ing will the architect find himself hamconceptions. The problem of harmonizing the demands of utility and taste must grow more and more difficult as numerous, complicated and unbending. Sanitary engineering demands a gas and electricity must enter the sertors, ventilating fans and dumb-waiters, coal vaults and ice chests must be hidden away in the recesses of the conaccess. Our modern social life requires its special arrangements of drawing, and reception, and dining, and music rooms; the private life of the family must be accommodated with its of the next. and bath-rooms, all arranged for the much to admire as to deplore. elaborate requirements the stern limitations of the building laws and the restrictions imposed by the size and shape the modern world, and we find ourselves, even in the planning of a dwelling house, face to face with an exceedingly complex and difficult problem. For within these compact limits of size and

Keeping in mind these considera- shape the architect must meet every one tions, let us see how they bear on the of the multifarious conditions enumerated above and many others before he can even begin to think of artistic proporthat just in proportion as material and tions and a lovely exterior. The client utilitarian requirements become exact- is inexorable in resisting any sacrifice of convenience or comfort to mere pered in the artistic expression of his beauty, and he is quite right. Architecture is his servant, not his master, and it is the architect's duty to work beauty into the forms born of these the claims of material comfort and hard conditions, not to attain it by disscientific construction become more regarding the conditions. Undoubtedly the task is difficult. Let those But this is precisely the case with mod- who bewail the inferiority of modern work, which must first of all meet the ern to mediæval art consult the practical requirements of a life infinitely article "Maison" in Viollet-le-Duc's more complex than that of any preced- "Dictionnaire Raisonné," and they ing age. Science has created innum- will realize the difference between erable wants which the architect must the poor, comfortless mediæval house satisfy, whatever else he may omit to of two or three rooms within damp stone walls, with its narrow passages, complicated and elaborate system of tortuous stairs, and unsanitary arrangecontrivances for the proper heating, ments, to which not even the French ventilation and drainage of even the author's eloquence can make us blindcommonest private dwelling. Steam, and the elaborate combination of rooms, halls, stairs, sliding-doors, baths, closets, vice of the householder, traveling kitchens and scientific contrivances through countless pipes and insulated which constitute the house of the averwires to furnish heat, light and power, age dweller in a modern city. He will to actuate bells and burglar-alarms, or perceive what few seem to realize—the to communicate thought. Gas engines immense difficulty of the modern proband steam engines, pumps and eleva- lem of house-designing as compared with that of the period he so admires. Moreover the conditions change nowadays more in ten years than in a censtruction, and yet be within the easiest tury of the Middle Ages, so that past experience is soon out of date and useless, whereas in olden times the slightest modifications sufficed to adapt the solutions of one decade to the problems What modern architects bedrooms and dressing-rooms, studies, have accomplished within these unlibraries and sitting-rooms, its closets toward limitations offers at least as greatest comfort and convenience of pecially in modern American country the inmates as to access, retirement houses of not excessive cost is there to and intercommunication. Add to these be found a remarkable combination of careful, logical and artistic planning, in which comfort, health and convenience are admirably provided for, with charmof building-lots in the larger cities of ing and picturesque exteriors,* inviting

*Readers of the "Semaine des Constructeurs" and of the "Révue Générale de l'Architecture" must have noticed the interest and admiration which this phase of American architecture has excited among French designers and critics. While duly alive to the defects of much of our domestic architecture, especially its proclivity to eccen-



WAREHOUSE. Corner Great Jones street and Lafayette place, N. Y. City.

H. Hardenburgh, Architect.

and full of character. In these houses serves the credit of his success in meetthere is doubtless much to criticise; ing those requirements. But it is but the faults are those of a nascent and virile art, still in process of development. If Pliny's delightful Laursolely to the varied exposures of the dif- better.

probable that any modern architect of reputation under the same social and economic conditions would have solved entine villa was planned with reference the problem at least as well, perhaps For the fact that modern ferent wings and chambers to the sun, the clients, with modern habits of life, reshade, the sea, and the various prevail- fuse to live in endless one-story building breezes, the architect certainly de- ings attended by a vast retinue of slaves, and prefer, even in country estates, houses of two or three stories, with hot and cold water, gas, furnaces or steam heat, double walls, glass windows and verandas; in which they can be served by two or three

tricity or mere picturesqueness, they bestow upon its qualities of sincerity, common sense and comfortableness, regard for outlook and vista, originality and appropriate-ness to site and surroundings, the heartiest praise. Several collections of American house designs have been pub-lished by important houses like that of Daly, while the French architectural journals are increasingly attentive to the progress and performances of American architects.

held responsible.*

Middle Ages, and, indeed, of any bybusiness in large cities have given rise tions. to a class of structures presenting are more unvielding and more varied than in any other class of designs he has to prepare. Upon a plot of ground usually in by lofty buildings, he must erect an edifice many stories high, and divide it into the greatest possible number of offices, so arranged as to bring in the largest possible revenue. He is usually and areas a foot of space not "absooffices with sufficient daylight. Everything being determined upon a basis of chimneys; innumerable wires must be severely blamed for a misplaced bellbutton, or an inconvenient elevator, or for dark offices which the restrictions

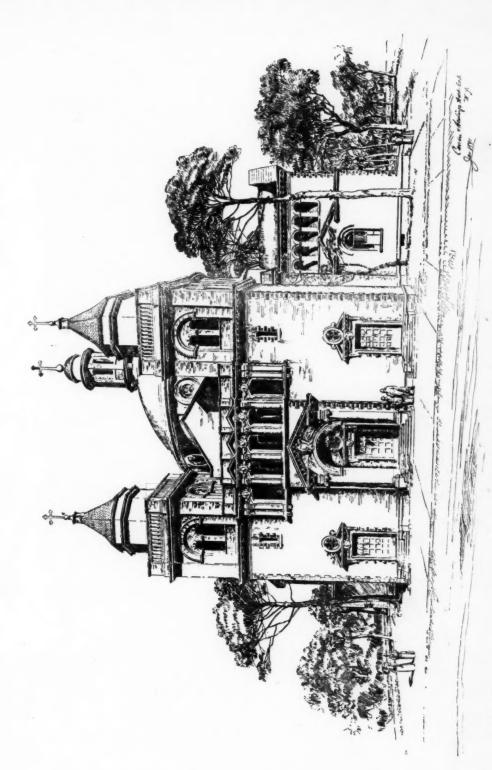
servants instead of a few hundred, imposed by the proprietor alone society, not the architects, should be have made inevitable, than for illstudied and inartistic treatment of the But if the modern house is an intricate architectural forms. In other words, structure compared with that of the material and practical requirements are by the conditions of the times made to gone age, the developments of modern wholly overshadow æsthetic considera-

Modern processes of building, morevastly greater difficulties of design and over, as exemplified in these monstrous construction. The problem they pre- many-windowed stacks of offices, still sent to the architect is one of the most further hamper the free expression of knotty and perplexing that can be con- artistic ideas. Iron and steel now ceived, and the practical requirements form a large part of the framework of every important building, and the development of constructive forms in metal has naturally proceeded along narrow and irregular in shape, hemmed the lines of engineering rather than of high art. In the Middle Ages engineering and architecture were practically one, both alike receiving their highest development in religious architecture, whereas modern engineering has busied enjoined against "wasting" in courts itself mostly with railroads, bridges and factories, and similar utilitarian lutely necessary "-the proprietor usu- problems, to the suppression of any ally constituting himself the judge of artistic development. Metal constructhe amount required; while at the same tion has followed in its lead, and the time he is expected to provide all the architect has to deal with the forms and processes which the market offers alike to the engineer and to him. It possible revenue, stairs and halls must is only in rare instances that he is perbe reduced as much, and partitions mitted to use these materials in the made as thin, as safety or the building special shape and manner which his laws will allow. The structure thus artistic taste would lead him to devise. planned must be threaded and honey- Furthermore, new materials, building combed with pipes and shafts, flues and methods and appliances are constantly being invented, all of which the archiconcealed in its walls and ceilings; and tect must appropriate and use to the its basement be filled with machinery best advantage if he would keep up of various sorts. Every one of these with the times. The building thus things the architect must himself think becomes a truly mighty problem in out, provide for and specify in detail, construction, requiring an immense whether or not he bestows attention amount of scientific and practical upon the artistic possibilities of the knowledge of the most varied kind, building. He is likely to be far more and the constant application of elaborate mathematical calculations and geometric processes. It is safe to say that the designing of a great building like the Auditorium at Chicago involves problems of construction fully as serious and difficult as were ever encountered in the most stupendous of mediæval cathedrals. And in judging of the results two facts must be remembered which reflect the highest credit upon the talent of modern

*See in "Discourses on Architecture," by Viollet-le-Duc, Vol. I, the "Discourse on the Architecture of the Romans," for comments on Pliny's Villa; also in "Popular Science Monthly" for December, 1800, article by Mr. Barr Ferree on "Architecture and the Environment." Mr. Ferree hardly appreciates as they deserve the attention and pains bestowed by most reputable American architects upon the very points he commends to their study in Pliny's Villa—salubrity, exposure to sun and shade, situation, prospect, convenience of arrangement and rational combination of parts.

designers. The first is that while the ing for a couple of centuries, must in erection of a cathedral occupied usu-the course of a year or two solve ally from fifty years to three centuries, twenty wholly diverse problems, not during all of which time the construc- consecutively, but a large number at tive problems it involved were being once, among which may be one or two studied in the light of the experience quite as complicated as the designing acquired in other and similar buildings, of a mediæval abbey church. it is not infrequently the case that a building like the Auditorium in Chica- which hedges in the architect with its go, or the World office in New York, inexorable demands, and measures his is completed and occupied within work not by its intrinsic eighteen months or two years from the but by its income-producing value, first inception of the plans. The is furthermore curiously allied with second fact is still more significant, a love of splendor and luxury which but rarely taken into consideration by disregards expense. This usually the critics. During nearly the whole takes the direction of personal comof the period from 1060 to (say) 1450- fort or of excessive display, seldom nearly four hundred years-architect- consistent with the most refined taste, ure in all northwestern Europe was but demanding what is showy and predominantly occupied with a single costly rather than what is really beauproblem—that of cathedral design, tiful. This love of splendor the archi-In England, France, Germany, Spain tect has to count with and minister to; and the Low Countries, and to a cer- he is thus compelled to prosecute his tain extent in Italy, the requirements work under conditions adverse to any of the cathedral or abbey church as to free expansion of his artistic nature. plan, arrangement and general construction were practically the same. In all these countries the one great pelled to consider requirements innupreoccupation was to vault the nave and merable and harassing; he is constantly side aisles of the type-plan bequeathed confronted with sordid considerations by the early Christian basilica, and to of cost and interest; he is held responexecute these vaults in stone and in such sible for the proper expenditure of a way as to provide a lofty clerestory millions of money, and for the correct and immense windows, with the min- execution of the minutest details of the imum obstruction of the floor space most extensive and complex structures. by piers and columns. Gothic architecture received its whole character from this problem, and it required the combined efforts of ecclesiastic the skill of the powerful bands of "lay

The commercialism of modern life, He is expected to master branches of knowledge the most diverse; he is com-Dealings with contractors and sub-contractors by the score; the selection of plumbing appliances and gas fixtures; three hundred years at least of pesterings of stupid, self-conceited and unreasoning clients, who set up their and monastic architects, assisted by own crude conceptions and vulgar taste against the cultivated taste of the builders" to reach such a consummate architect; the adjudication of disputes result as we admire in Amiens, Stras- between clients and builders, calculaburg, York, Burgos or Antwerp. In tions of girders and trusses, thrusts and our times no two successive problems weights-these are cares and duties present conditions or requirements as which try the capacity and patience of similar as are almost any two mediæval the modern architect wholly outside of cathedrals of the same period; the ex- the main task of designing the building perience of a quarter of a century ago and preparing the drawings for its is useless in dealing with the design of erection. Amid such an untoward ento-day; and the modern architect, in- vironment, and occupied with such perstead of being able to devote a life- plexing cases, he is asked to solve time to one or two buildings as his problems of whose difficulty what has contribution to the solution of a prob- been already said can give no adequate lem on which the whole confraternity conception. What wonder if the artisof architects have been unitedly labor- tic faculties are warped and stifled; if



CENTRAL CONGREGATIONAL CHURCH,

Carrere & Hastings, Architects.

Providence, R. I.

Carrere &

beautiful seem less and less imperative; tects pursue their vocation. The uniif his failures are many and his suc- versal commercialism, the his artistic inspirations with the hetero- the lack of sympathy or appreciageneous and iron-clad demands of tion on the part of clients and modern life and business, and the un- corporations for what formed taste, or bad taste, of a philis- noble and lovely in art, the con-

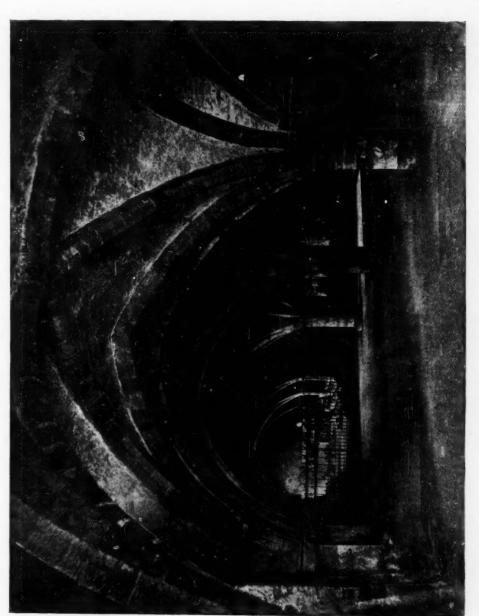
of geniuses.

mestic architecture, to which brief aldition of a branch of engineering. immense difficulties of this branch of churches of Mediæval Europe. architecture, we cannot fail to be imthe details, while many of the most tion who pursue their labors modestly not possibly control.

including theatres and halls of assem- counter. The proportion of highlybly and governmental buildings, the educated and thoroughly-trained men difficulties are of a different kind, and among them is increasing; architecturthe opportunities for artistic expression al schools are multiplying, and amid all greater than in commercial structures. the confusion of styles which arouses ever, greatest on the artistic side, in growing dignity and refinement in comour own country at least, and for this position and detail. The future cannot our architects are certainly in a meas- be predicted, but it certainly is not ure to blame. met by the presence of the adverse en- in a period of transition, and suffer

considerations of the good and the vironment amid which modern archicesses few in the task of reconciling pressure of utilitarian considerations, is truly tine clientèle? To reach the ideal solu- stant dinning of the question of cost, tion of the problem, to extract from economy demanded precisely where these hampering conditions results in- liberal expenditure should be applied, herently beautiful, demands true genius, and display called for where a sober and the world has never been prolific economy were far better-all these influences tend to stifle the artistic When one considers the results spirit, and to reduce architecture achieved in the domain of modern do- as nearly as possible to the conlusion has already been made, one must this department, moreover, as well as recognize the existence of a vast in religious architecture, the constant amount of highly meritorious work, in change in the requirements of buildwhich artistic beauty is admirably ings of the same class operates preciseblended with practical excellence and ly as in domestic and commercial archiscientific construction. In the architect- tecture to prevent any such continuous ure of modern commercial buildings, approach to a final and perfect solution the failures are certainly more obvious, as we find in earlier ages—in the Doric but the triumphs are numerous and temples of Greece, for example; or in praiseworthy. When we consider the the Thermæ of Imperial Rome, or the

If these observations have assisted pressed with the talent and skill often any reader to an appreciation, however brought to bear upon the problem. imperfect, of the great difficulties which Even when the artistic aspect of these beset the development of modern arbuildings is unsatisfactory—let us cite chitecture, he will perhaps view its as an example the New York World shortcomings with greater lenience and building-one is compelled to admire its achievements with greater respect. the sound and often ingenious construc- An intimate acquaintance with the tion, the masterly dealing with extra- great body of its practitioners, not ordinary difficulties of planning and merely with the conspicuous leaders, arrangement, and the taste shown in but with many also of humbler reputaobvious defects prove on investigation and faithfully in obscure places, would to be due to the interference of a client certainly lead to a high estimate of the in matters of taste, or the force of cir- general earnestness, conscientiousness cumstances which the architect could and intelligence with which they endeavor to meet and solve the problems In the domain of public architecture, and overcome the obstacles they en-The defects in such buildings are, how- the ire of the critics there is manifest a But here again we are without signs of promise. We are now



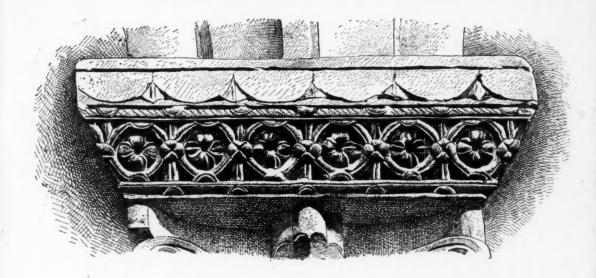
CRYPT, LINCOLN CATHEDRAL.

a period. Neither indiscriminate praise nor sweeping condemnation on the part of the public will help the cause of noble art at such a critical point in its development. It is to be hoped that the public, to whom the architect looks for his employment and his reward, may come in time to such an acquaintance with the nature of his work and with his own disposition and aims that the praise of the whole community shall be unstintingly awarded to every sincere and intelligent effort of his towards a pure and noble result, and its condemnation visit with merited severity all that is base and unworthy in this greatest of the arts.

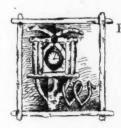
from all the difficulties inherent in such with the nature of his work and with

A. D. F. Hamlin.





THE ROMANESQUE REVIVAL IN AMERICA.



worthy examples, town of a country than in any other the difference must be sought elseto be there most fully reflected and the conditions of our life as unrepublican and commercial cities, from

E have considered Renaissance architecture of Italy. The the Romanesque palaces of Venice and Florence and revival first in Genoa tell us plainly enough that their New York, almerchants were princes and their trafthough New York fickers the honorable of the earth-as was neither its plainly as that story is told by Fifth starting point nor avenue and Commonwealth avenue and perhaps contains Michigan avenue and Rittenhouse its most note- square. If the monuments of these But there is so latter thoroughfares are upon the whole much more and so much costlier less admirable than those of the older building in the biggest and busiest and transatlantic towns, the cause of that any architectural movement that where than in a difference of the puris general and national is pretty sure suits of those for whom they were built,

While New York, then, may not be illustrated. We are apt to deplore the American town in which interest in architecture, or in any art, is either favorable to art, and so doubtless most general or most intelligent, it is in many ways they are; but it is not be- by dint of mere size and activity that cause we are living in a commercial refrom which most examples can be public, for it is out of the conditions of culled of any architectural movement, whether it be a serious attempt to de-Athens down to Venice, that some of velop a rational mode of building, like the most energetic and spreading art- the Gothic revival of twenty years ago istic movements have come that the or the Romanesque revival of to-day, world has ever seen, while it is directly or the adoption of a frivolous and to the commercial and political rivalry fruitless fashion like Queen Anne. of towns that we owe the development The former generation in which Boston of ecclesiastical architecture in France boasted itself to be the Athens of in the thirteenth century, of civil archi- America has passed away, and in most tecture in the Netherlands and of the respects the boast may now be idle, mediæval architecture as well as of the but Boston is the source of the Roman-



TRINITY PARSONAGE,

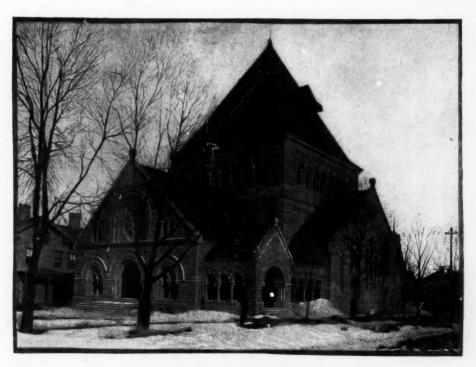
Boston, Mass.

H. H. Richardson, Architect.

attest, to and beyond the Mississippi. mon style, an understood way of workremoval of its author to Boston, where understood way of working.

esque revival which has spread itself been worth making even if its success over the country, as our illustrations had been more questionable, for a com-Mr. Richardson himself was a practi- ing, founded upon "a consistent system tioner in New York when he designed of construction and decoration," is a Trinity in Boston, and it was undoubt- chief need, not merely of American edly the success of that church which architecture but of all modern archibegan the revival. It was very possitecture. In France, and among the bly this success that determined the Latin nations in general, there is an from that time until his death, for the trouble with it is that it is not founded decade that remained to him and that upon "a consistent system of construcreally comprised his artistic career, he tion and decoration" for its decoration, devoted himself to showing the applicits architecture, is inconsistent with its ability of the style in which he wrought construction or irrelevant to its conto all the problems that came to him struction, and so the style lacks life, for solution. The attempt would have and in lacking life lacks the possibility against the system and the outcome of any art or of all arts.

of progress. It seems strange that a who remember the impression produced style so obviously devoid of logic upon lovers of architecture throughout should have been matured and propathe country by the publication, in the gated by a nation that above all things "New York Sketch Book of Architectprides itself upon being logical. It has ure" for 1874, of Mr. Richardson's perbeen attacked upon this ground by spective sketch of the tower of Trinity, many Frenchmen, most conspicuously remember it as the advent of a new and by Viollet-le-Duc, whose literary work individual talent, an event that does not was a consistent and continuous protest happen often in a lifetime to the lover of

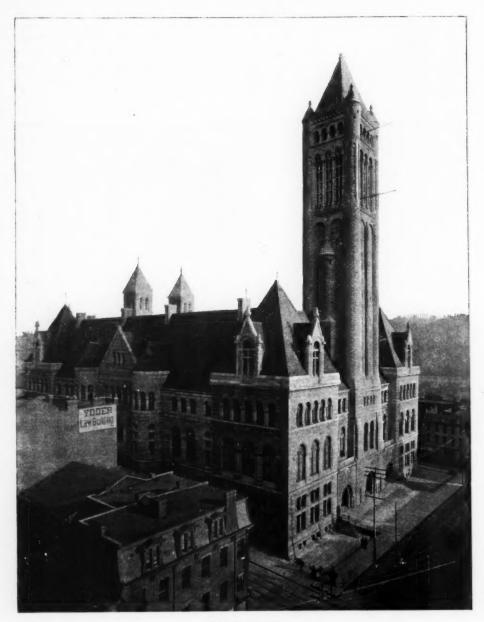


SHADYSIDE PRESBYTERIAN CHURCH, Shepley, Rutan & Coolidge, Architects.

the architectural instruction of the Ecole des Beaux Arts. It was for this reason that when he came to lecture at that institution he was hissed and hooted for a blasphemer by its students, of whom, for all I know, Mr. Richardwho was afterwards to show the advan-

" Then felt they like some watcher of the skies When a new planet swims into his ken.

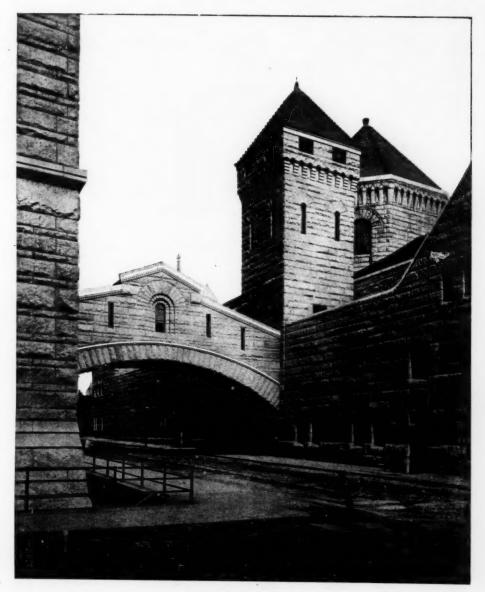
Their admiration and their glad surprise were not at all diminished if they happened to remember that the work son may have been one, the very man which thus affected them was, in its general form and massing, and in some tage that a training in the conventional of its features, a reminiscence of the architecture of France gave to the central tower of Salamanca; for the career of an architectural revolutionist. tower of Trinity is not merely the Trinity was undoubtedly the starting tower of Salamanca restudied and enpoint of the revival, and it would be riched and improved, but the design of rash to say that the revival has pro- it throughout attests the presence of a duced anything better. Those of us more original power than that of the



Pittsburgh, Pa.

COURT HOUSE.

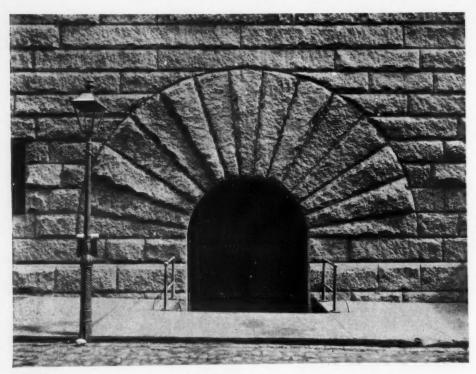
H. H. Richardson, Architect.



Pittsburgh, Pa.

PITTSBURGH JAIL.

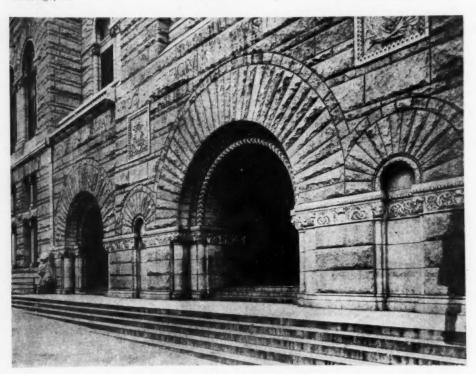
H. H. Richardson, Architect.



Fittsburgh, Pa.

MAIN ENTRANCE TO JAIL.

H. H. Richardson, Architect.



Pittsburgh, Pa.

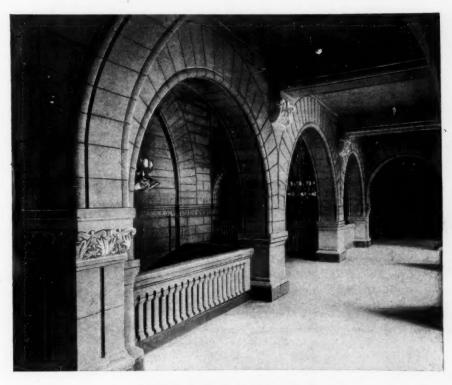
MAIN ENTRANCE TO COURT HOUSE.

H. H. Richardson, Architect.

finest and most typical, as it is the first ment. monument of the Romanesque revival. The church has its faults, as its archi- of Trinity has not been so fruitful as tect well saw, and he endeavored during in some other departments. Mr. Pot-

designer of what we must still call the the first half of the thirteenth, and that original. This tower is the church, and nothing is likely to be done except after fifteen years it remains perhaps under a sense of responsibility which the noblest work that American archi- it is almost unexampled to see exhibited tecture has to show, and certainly the with respect to a contemporary monu-

In church building itself the success



Pittsburgh, Pa.

INTERIOR PITTSBURGH COURT HOUSE.

H. H. Richardson, Architect.

his lifetime to amend them. Perhaps ter's work in New York, which we

these may be summed up in one fault, have already considered, is nearly all that the work as executed does not suffi- the ecclesiastical architecture in that ciently and at all points subordinate city which has been directly inspired itself to this central and dominant feat- by Mr. Richardson's example. About ure, and conduce to its predominance. the most important church erected But it is a fact not less creditable to the since Trinity is the Protestant Episcoæsthetic sensibility of Boston than to pal Cathedral at Albany, by Mr. R. W. the beauty of the work itself, that in Gibson, a design in a free and somethe various projects for the improve- what Hispanized English Gothic, which ment and completion of the church in much of the detail, however, shows there is evident as great a reverence for a reversion to Romanesque. Mr. Richa product of the last quarter of the nine-ardson's unsuccessful design for the teenth century as if it were a relic of same building gives promise of a build-



Cincinnati, Ohio.

CHAMBER OF COMMERCE. H. H. Richardson, and Shepley, Rutan & Coolidge, Architects.

ing perhaps upon the whole more suc- is developed into the church to which cessful even than Trinity, and the in- the other features of a short nave and fluence of this design, even more than shallow transepts are brought into harof his executed work, was visible in monious subordination. A church at many of the designs for the Cathedral Andover, Massachusetts, by Messrs. of New York. A Presbyterian church Hartwell and Richardson, comes much at Pittsburg by Mr. Richardson's suc- nearer in its general form and disposicessors, Messrs. Shepley, Rutan and tion to the accepted type of an Ameri-Coolidge, is an unmistakable and a can country church, a nave without very successful piece of Richardsonian transepts or clerestory and a corner Romanesque, which owes much of its tower. In the combination of material success to the skill with which the cen- and in the treatment of the detail it is tral tower, a lower and much simpler evidently enough Richardsonian, withcrowning feature than that of Boston, out excluding individual thought on ample border of wall.

the part of its designer. The quoining country, and this would be a result of the angles of the square and massive very much to be deplored. Perhaps it tower in the darker of the stones emiss unfortunate that some of its author's ployed is an effective device, and so is civic structures are more easily imitable the framing of the belfry lights in an and adaptable. With intelligent and artistic adaptation there is of course no Nevertheless it is in civic work much fault to be found. Have we not just more than in ecclesiastical that the in- seen how in starting from the lantern fluence of Richardson is manifested, of Salamanca, Mr. Richardson himself and that the Romanesque revival most not only made an advance upon his



prevails. Clergymen and laymen who prototype, but evolved a beautiful serve upon building committees are tower which is to all intents and purstill commonly of the opinion that poses a creation? If any architect can pointed Gothic is more "churchly" than do this with the work of any other Romanesque, and architects continue architect, we shall never say him nay. to consult their preferences. It is per- The success of Mr. Richardson's county haps fortunate that Trinity church in buildings at Pittsburg has stimulated Boston is very much too large and countless imitations, of which, forelaborate and costly to be very often tunately, most remain on paper, but repeated on the same scale, while it is one is in course of execution in the quite impracticable to reduce its scale Court House of Minneapolis. It would so as to make it available for a smaller not be fair to call this a mere imitation, and cheaper church. Otherwise we nor is its execution to be deplored. might see reproductions of it in But its designer would not be apt to miniature springing up all over the deny that the general massing of his

building is derived from Mr. Richardson's work, to which some of his competitors adhered even more closely. The Pittsburg buildings derive their individuality in great part from the conditions of the problem, a pile in intractable granite built in a smoky town in which the deposits of soot threaten to nullify all delicacy of de-

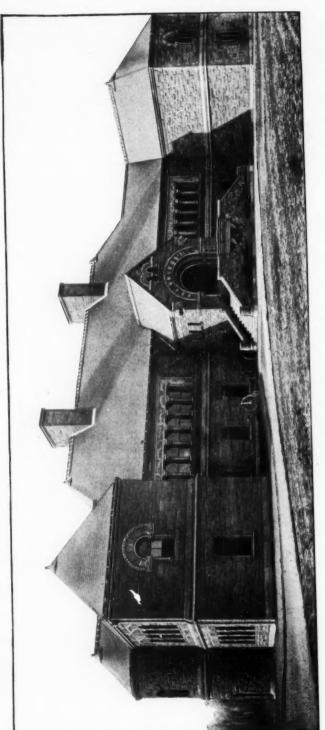
COURT HOUSE. Pittsburgh, Pa. H. H. Richardson, Architect.

tail and to encumber all projecting members. It would be highly un-reasonable to reproduce, in a more facile material and in a clearer air, the treatment imposed by these conditions. All that can properly be conveyed from the building and made available elsewhere is precisely the general com-

One of the latest civic works of Mr. Richardson, and one of the most successful, is the Cincinnati Chamber of Commerce. It is so late indeed that the design was left to be completed by his successors. His peculiar power of simplifying a complicated scheme by seizing upon what is really the most important of its requirements, detaching and emphasizing these, and converting the rest into accessories, has never been more signally illustrated than in this The main hall unmistakably asserts itself on the building, in spite of the four stories above it. Odious as comparisons are, it is worth while to compare the effect of this treatment with that of the New York Produce Exchange, where the requirements are very similar. The arcades of the hall are in themselves very powerful and impressive, and they gain very greatly in power from the solid bounding towers that give a greater assurance of secure abutment than could be given by an equal space of flanking wall, while these towers are produced above the eaves so as to relieve at once and to accentuate the great pyramidal roof, as pinnacles group themselves about a spire. The skyline is further animated and the monotony of the roof relieved by the tall and picturesque dormers that in their form and arrangement recall those designed by their authors for the Capitol at Albany, but are distinctly more successful. The material of the Cincinnati building, the pink Milford granite, compels a great severity of treatment. Of ornament, strictly so called, there is scarcely any, while the mouldings are such only as are needed to mark the main divisions of the building and to express its construction. Severe as is the treatment of detail throughout, that of the substructure is so much more uncompromising in its severity than that of the superstructure, and this character is so much promoted by the batter of the basement, as to give the superstructure an air of richness and almost of elaboration in comparison. Another building of similar purpose is the Boston Chamber of Commerce, now in course of erection. It is of the same position, and this the designer of the material, and it is equally Romanesque Minneapolis Court House has conveyed. in character, albeit the gabled dormers it a somewhat Gothic air. The separate roofing into a tower of an end of the building is explained and justified by the triangular site, and the resulting mass with its conical roof recalls the New York Cotton Exchange, although the treatment of masses as well as of detail is so widely different as to have only this point of resemblance. In this case the windows that indicate the great hall are raised upon a two-story basement and crowned by an attic of a emphasizes the importance of the principal division, and that is pretty clearly be the reversal of the disposition by two to the attic. Here again the principal requirement of the structure beand this is in itself an achievement, considering the difficulty to which the the same building a place of public assemblage and several stories of rooms difficulty which so many designers find insuperable.

After churches, perhaps even without this exception, the most attractive and tempting of problems to a modern architect are the institutions for the promotion of humane culture, the number and importance of which, in our country, attest not merely its wealth but its public spirit and its progress in civilization. In museums and libraries and the like the requirements of the problem, however intractable they may part really architectural requirements. The most characteristic of our current which this cannot be said. In an ele-

of what may be called the tower give and character of his building in order to secure this aspect. That a building should be solidest at the bottom and lightest at the top is one of the most elementary of architectural requirements. That it should be lightest at the bottom, that is to say, that its ultimate supports should be attenuated to a minimum, is, in the minds of many owners, an elementary requirement of commercial architecture, and it is this which designers find most embarrassing. The highest successes of our commersingle story, an arrangement that cial architecture have nevertheless been won by those architects who have not evaded this problem but have attacked more eligible in this place than would it directly, but of course they must wish for a less exacting donnée, since even giving a single story to the basement and with the best of their works it is necessary to make allowances. It is otherwise with the institutions of which we comes the principal feature of the design, are speaking. There is, for the most part, no such contradiction involved in them between use and beauty, but the elevator has given rise of uniting in facts of the structure need only to be expressed straightforwardly to tell an interesting story, of which the interest constructed to be rented at a profit, a may be enhanced according to the ability of the story-teller. The first of Mr. Richardson's secular works to arrest the attention and to secure the admiration of his profession was the Woburn Town Library, of which the design was published in 1877, just after the completion of Trinity. It was well worthy of the admiration it excited, though it was improved upon in a series of charming works for the same purpose and of the same character at North Easton, Quincy and Malden. Perhaps the Crane Memorial Library at Quincy at first appear, will, upon sufficient is the most successful and exquisite of study, yield to the designer who follows these, and certainly it ranks very high them faithfully, the basis for striking among its author's successes. In anand individual architectural expression, other place I have expressed what That is to say, they are for the most seems to me the essence of Richardson's power of design as the power of simplification, and these buildings seem to work is in commercial architecture, of illustrate this. Assuredly the series shows a progressive simplification which vator building, for example, the need has its climax in the building at Quincy, for light, especially urgent in the lower where the simplicity would be baldness stories, makes very difficult the task of but for the great art of the adjustment giving a lofty building a sufficient as- of the three features of the front, the pect of massiveness to secure apparent reading-room, the book-room and the strength and stability, and the designer entrance, while the interior shows some is tempted to contradict the purpose of the most exquisite of his detail. The



LAWRENCEVILLE UNHOOL,

Peabody & Stearns, Architects.

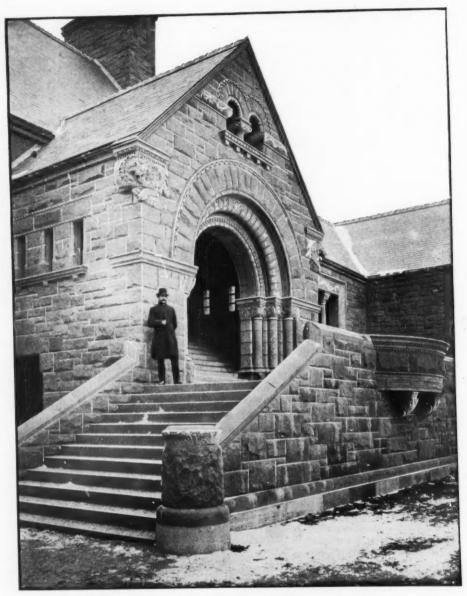
Lawrenceville, Mass.

by Mr. Richardson's successors in the truly Richardsonian Public Library at New London, where the two features of the front, the arcade of the entrance and the large lintelled openings of the reading-room are cleverly harmonized by the introduction between them of a third feature in the polygonal turret, and where the chief defect of the design at Quincy, the leanness of the terminal pier of the colonnade, is obviated by an emphatic flank of wall. The success of this beautiful little building is another illustration, as indeed the progressive success of Mr. Richardson's own series of libraries is an illustration, of the wisdom of employing again and refining upon a motive already employed, rather than of abandoning it because at some points it fails to satisfy the designer, in favor of turn worked out crudely and in turn abandoned.

Another very successful piece of simplification is the school at Lawrence-Massachusetts, designed by Messrs. Peabody & Stearns, where the angle of the building. principal story is a colonnade divided would be impossible to disturb the regood indeed, and in spirit is truly Ro- a of the members to which it is applied.

Another work by the same architects, tral is much the rudest. the arches doubled under relieving arches suggested.

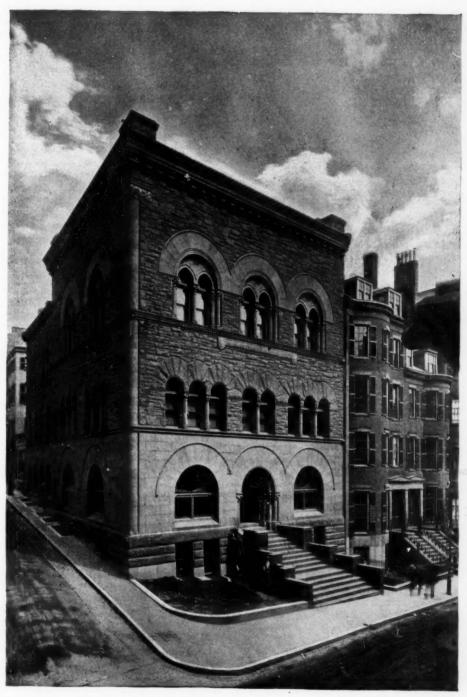
series has been admirably supplemented in the third story, which recall rather some examples of Italian Gothic than any phase of Romanesque, and it aims equally at walliness. Blank wall is indeed one of the most certain, though it is also one of the most obvious means of gaining architectural effect, and it was by his perception of its effectiveness, and by his faculty of judiciously letting it alone, that Mr. Richardson exerted one of his best influences upon the architecture of the country. But clearly enough it is necessary to the effectiveness of blank wall that it should be relieved with openings, and that it should be in the right places. In the amplitude of its blank wall the building now under consideration leaves nothing to be desired, and not much in respect of its disposition, laterally, with reference to the openings. These are grouped at the centre with piers dividing the front a radically different motive to be in into three bays, but these intermediate piers are distinctly subordinated to the much wider terminal piers, and effectiveness of this disposition is much enhanced by the large roll moulding that defines the outer Vertically, also, the arrangement of the blank by the porch at the centre, set between wall is very effective, and gives the a basement as nearly unbroken as may front a look of massiveness that is very be and by a roof absolutely unbroken, satisfactory until one happens to ask except for the emergence of the plain himself where the floor lines occur. He chimneys, while it is framed between then perceives that all the stories are projecting wings of which the flanks lighted from the bottom, while the great are absolutely solid, while the fronts stratum of wall between the openings are pierced by but a single opening in of the upper story and the cornice even each story at the centre of the face. It suggests that there may be an additional floor, not expressed at all in the exterior pose of such masses, the massiveness of and lighted from the roof. At any rate, which is accentuated rather than en- the practical sacrifices to the enlargefeebled by the openings, even with bad ment of the wall spaces seem to be alike detail. In point of fact the detail here, serious and superfluous. The arrangeexcepting the questionable decoration ment is questionable also by which a of the lintels of the colonnade, is very basement of cut stone is made to carry rock-faced superstructure. manesque, as the treatment of the capricious variation from the rule, with porch bears witness, in which the ornathe greater elaboration and enrichment ment again accentuates the massiveness of the first and third stories, gives the wall three divisions of which the cen-Nevertheless the American Unitarian Association the front has undeniably the look of Building in Boston, though designed massiveness which the designer meant under very different conditions, is to give it, and recalls some of the Florequally Romanesque in spirit, in spite of entine work by which it may have been The detail is of various



LAWRENCEVILLE SCHOOL,

Lawrenceville, Mass.

Peabody & Stearns, Architects.



AMERICAN UNITARIAN ASSOCIATION BUILDING,

Boston, Mass.

Peabody & Stearns, Architects.

much more effective.

ardson's passion for simplification was expressed in Mr. Eidlitz's design, while furnished in his design for a public the tendency of an expressive treatments were that it should contain not to "scatter" and to produce a stragonly a large and growing library and a gling building, that is a congeries of outcome, and as a matter of fact the problem. his building on the site in his own way, the unusual arrangement.

quality. The sill courses that mark the of the tower which is meant to unite divisions of the stories are very sharply and dominate the parts. Any requireand effectively profiled, and the ornament of a building that is in itself legitment of the upper is well designed and imate is a potential source of architectwell placed. On the other hand, the ural expression, and may become the capitals of the columns at the main en- cause of an architectural effect, and trance are very unfortunate. They are this is a truth that is too generally fornot foliated, but merely projected into gotten by architects who, in despair of flabby and pendulous lobes, which do making an effective piece of architectnot in the least convey the notion of ure out of the requirements they are support that is expressed in every striving to satisfy, mask the work they well-designed capital, and which are not are really doing with a screen of archiin any respect admirable. A bare bell tecture derived from some other source would be much more expressive and than a consideration of these requirements. Nobody will dispute that all A striking illustration of Mr. Rich- the varied purposes of the building are building in Buffalo, of which the requirement of such a scheme on such a site reading-room, but a museum of fine arts parts rather than a whole, is effectively and an historical collection. The counteracted by the introduction of the enumeration of these requirements does tower, at the point where the abrupt not indicate a simple building, much change of axis of the building presents less a building of one feature as their the chief architectural difficulty of the The tower does evidently projectors of the building accompanied bind the buildings together and thus their invitation to competing archi- serves its purpose, while the detail, tects with a sketch plan that was of everywhere a modelling and modificaconsiderable complication, since it had tion of the masses, is very well adapted not merely to provide for these varied to further the impression of weight and requirements, but to be adjusted to a solidity which the disposition of the site of irregular shape. Nevertheless, masses gives, as well as the impression by disregarding this plan and putting of picturesqueness which arises from " Pictur-Mr. Richardson managed to evolve a esqueness" in architecture, by the way, design of which the principal front is in so far as it is an admirable quality, effect a single feature, a long arcade always gives the impression of being a abutted by two round towers and broken casual and accidental result, and is only by the steep gable of the porch at always offensive when it is perceived to its centre. To this feature a very plain have been sought and premeditated. basement of lintelled openings below In this instance the picturesqueness of and a blank wall surmounted by a sky- the building so evidently proceeds from light above served as foils. It was a the conditions of the problem that it is very interesting design, and the more attractive by reason of its unsought so by reason of the complete subordina- and unforced character. The most contion of the front to its principal feature. spicuous of the detail of the building is The accepted and executed design by in the entrance, of which an illustration Mr. C. L. W. Eidlitz worked upon the was given in the first number of this lines of the imposed plan, and the demagazine. The position of this feature signer's effort is evidently enough to helps to dissemble the change of axis, express in his building the different and thus to further the purpose for purposes of its parts, while at the same which the tower is introduced, while its time bringing them together and bind- detail is truly and admirably Romaning them into an architectural unity, esque both in its massiveness, and in This latter purpose is the main object the fact, which is everywhere evident,



Buffalo, N. V.

LIBRARY AND ART BUILDING,

Cyrus L. W. Eidlitz, Architect.



Baltimore, Md.

ST. PETER'S CHURCH,

McKim, Mead & White, Architects.

that it is literally a "detailing" of the character of the design of the Buffalo mass, and not the addition of anything building is given to it mainly by the extraneous. This last, of course, may frequent gables, and it is equally eviequally be said of Gothic design, and dent in another work of the same indeed, in spite of its massiveness, and author, a design for a museum at San of the fact that none of its round Diego, California, in spife of a detail arches are pointed, the general treat- equally Romanesque. This is a buildment of the building is such that its ing on an unrestricted site and presents expression is as near to that of a sturdy a front generally symmetrical, though Gothic as of an elaborated Roman- the symmetry is obtained in the Gothic esque, and that few changes could be manner by a balance of masses rather needed to convert it into an unques- than in the classic manner of providing tionably Gothic building, although it is for every feature on one wing its exact quite plain that the architect had no counterpart on the other. It is a very intention of preserving academic purity successful design, although the gabled or of presenting an example of any his-centre of the principal block, in itself a torical style. The Gothic and aspiring very good composition, offers perhaps

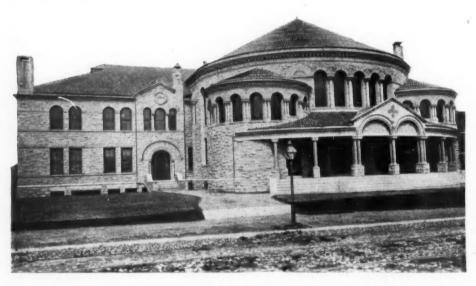
an incongruity with the treatment of dark glazed tile for the roofs. One the roofs elsewhere, and the treatment can indeed wish that a design so sucof the crowning member of the tower cessful should have been more careleaves something to be desired. But fully wrought out in detail. The masses the device is especially effective by here are so powerful that they would which the base of this tower is incor- have borne a much higher elaboration porated with the building, while its than they have received, and that the shaft detaches itself at the cornice line, spectator might have been led to linger and the arcade of the nearer angle is a over the parts with the same admiravigorous and effective piece of design, tion that is extorted by the aspect of to which the expression of an abutment the whole. Rudeness is the defect of otherwise scarcely adequate is secured the quality of massiveness that so by the solid corbelled turrets at the eminently belongs to Romanesque, but

also a group of parochial buildings, cessful as it is the chief feature of the by Messrs. McKim, Mead and White, design and in the mass it is singularly is one of the happiest examples of the impressive. But its massiveness and skill of those designers and almost if its solidity need not have been comappears rather in character than in of its parts. A shaft of ten stages of than to any felicity of detail. It is to pierced at the centre by one slit or by cal observer is forced to admire the not naïveté at all, but affectation. used rough-faced for the walls and a As it is, this hood seems to have been

it is not in itself an artistic quality. A church in Baltimore, comprising The great solid tower is the most sucnot quite a unique essay of theirs in Ro- promised, nay, they might have been manesque, albeit its Romanesqueness promoted by a more careful modelling detail. It owes its effect, indeed, more rock-faced wall, the stages divided by to the vigor of its massing and to the unmoulded offsets, at each of which success of the general composition the tower is diminished in area, each pay a high compliment to a modern three, and the whole crowned by a building to say that it is better in mass steep hood is, as we see, a very striking than in detail, and better in perspec- object, but with the treatment that it tive than in elevation, and this may receives here it has an effect of rudetruly be said of the work under con- ness and archaism that seems affected sideration. It is a modern "auditorium and that has a dangerous tendency to church" and the amphitheatrical sweep convert it, in spite of its evidently is perfectly expressed. Its expression structural character and of its mass, into gives rise to difficulties that are two- "scene painters' architecture." It is fold, first in allying this central oval as rude as an Irish round tower of the to the rectangular buildings that sur- twelfth century, or as one of the earround it and next in bringing the steep liest efforts of the Lombard builders in and conspicuous roof of the auditorium Italy. These structures are admirable into harmonious subjection to the for their naïveté, but an intentional tower, which is a feature yet more im- naïveté such as the modern architect portant. These difficulties have been exhibits when he reproduces their rude vanquished so completely that the or- work in spite of the later developments dinary observer is scarcely led to sus- of it of which they could not know and pect that they existed, while the criti- of which he cannot help knowing, is results of what he perceives to have quality of his work is not simplicity been the long and patient study by but simplesse, and so far as it appears which the various masses are brought tends to mar an admirable work. into a whole that has so much variety Surely there would have been no detriin its unity, and that is so complete a ment to the vigor or solidity of this composition both from the point of tower if its upper stage had been someview from which our illustration is what opened and somewhat lightened taken and from the opposite point of so as to become really a belfry stage, view. Its success is enhanced by the and if the summit had been so treated material employed, a very dark stone as to prepare for the hood of the roof.

Baltimore contains another very inter-

casually dropped upon an unfinished nal, and the architect is very much to tower, and this is an effect the designer be congratulated. But it may be quescannot have intended. All the same, tioned whether this disposition would it would take a much worse fault to not have been even more successful if neutralize the impression of power that the circular building had been set upon is given to the pile by the disposition a rectangular base, of which the rigid of its masses, and the contribution that angles, if they had been treated as skillevery member of it makes to the total fully as the superstructure, would have given an assurance of stability which can scarcely be attained, or at least esting specimen of an amphitheatrical which has not been attained, in a buildchurch, designed by Mr. Cassell, in which ing of which the plan is throughout the amphitheatre is not only completely curvilinear. Moreover, such a disposi-



Baltimore, Md.

CHURCH,

Chas. E. Cassell, Architect.

expressed but constitutes the building, tion would have enabled the architect the addition of a portico following its to ally with his church the subordinate curve and framed between two apses, building which now appears quite exbeing simply an extension of it. The traneous to it if not incongruous with scheme is effective as well as expressive, it. In an attempt so new as that here and the scholarly detail is well calcu- made, and upon the whole so successof material employed, a light sandstone for the wrought work and a light type. The architect is entitled to the of glazed and corrugated dark tiles. the indications of his problem, and of of the flanking apses to the taller roof novel work, of which the novelty is not and arcade of the auditorium, and of sought but comes of itself. the portico with its central pediment to

lated to carry out the effectiveness of ful, errors or shortcomings of detail the general disposition, which is still may be condoned on much easier terms further enhanced by the combination than in a case in which the designer is working upon the lines of an accepted granite for the wall field, with a roofing high praise of following out with fidelity The relation of the roofs and arcades having thus produced a successful and

A Jewish synagogue, also in Baltiall these is as harmonious as it is origi- more, and built of a combination of



Baltimore, Md.

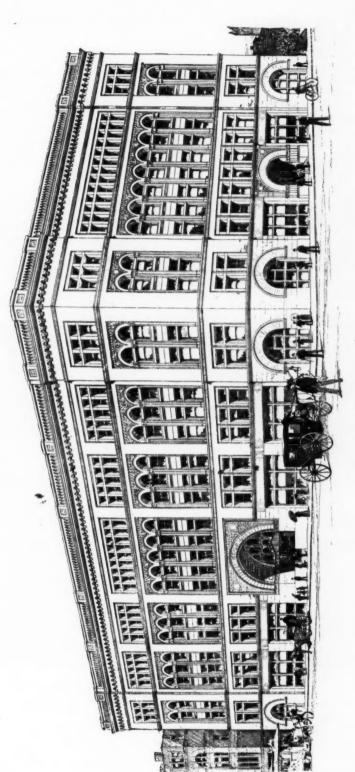
BALTIMORE SYNAGOGUE,

Chas. L. Carson, Architect.

just described, is a striking work to gruous with the purpose and the treatwhich some of the details give a Ro-ment of the building, and it seems as if manesque character, but which in its hipped roofs would not only have general treatment belongs much more brought the substructure more into to the Eastern or Byzantine than to the congruity with its crowning feat-Western or Romanesque departure ures, and supplied a motive for the from Roman architecture. There is assuredly nothing of Sara- not fortunate. cenic in the design of the Baltimore synagogue, while the impression it scarcely an American city, unless it be makes is assuredly Asiatic, or at least in the far South, which does not contain Slavonic, if not distinctly Semitic. specimens of what the designers at least This is given to it mainly, if not believed to be Richardsonian Romanentirely, by the bulbous and lustrous esque, and many of them are of a high domical roofs of the towers and of interest. The prototype of many of the centre, features that even recall them is Mr. Richardson's own Field the Russo-Greek development of building in Chicago, which was perhaps Byzantine architecture. In fact these his most important and successful work alone designate the style, for if are not commonly very successful, and they were removed, and the octagonal scarcely one is worthy of a comparison shafts of the towers, the building would with the original, although analysis lose not only its Oriental character might have led an architect very much but the greater part of its architectural inferior to Mr. Richardson in power to interest. It would not lose the im- advance upon it by avoiding such depressiveness that it derives from the fects as became obvious in execuextent of massive wall of which the tion. The great commercial buildings openings are so placed and so designed in Chicago, designed by Messrs. Burnas to punctuate the mass. An excepham & Root, are distinctly Romanesque tion to this rule occurs in the projection in their inspiration, though they owe little of the wall between the towers, and in directly to Mr. Richardson, and indeed the violent exaggeration of the size of testify to a very distinct artistic indithe central opening, of which the ex- viduality in their designer. As buildaggeration is rendered of no effect by ing projects, so to speak, apart from the lack of modelling and by the equal their architectural merits, they have a employed does not supply this requisite. ably individual, and the successful feat-

materials similar to that of the church Indeed, the gables themselves are incon-The archi- horizontal band that is now motiveless, tects of synagogues in our time seem to but would also have considerably imbe pretty well agreed that their works proved the relation between what is should have some suggestion of the now a somewhat commonplace and a Orient and they look for their prece-somewhat awkward building, and a dents for the most part in the great dome and towers which have spirit and repertory of Saracenic architecture, character-a relation that at present is

In commercial architecture there is and ingenious terminations in that kind. The reproductions of it exaggeration of the subdivisions. The very high interest, for scarcely any meaningless cornices that traverse the other American city has such a piece of walls at the foot of the gables are as intelligent planning and administration far from being Oriental as they are on so great a scale for housing a great from being Romanesque, and recall colony of business men in the most rather specimens of our colonial archi- commodious fashion as is presented by tecture than of any manner of building the Rookery, or, in another department, more germane to the designer's pur- an enterprise on an equal scale so well pose. They give the building, indeed, conceived and executed as Messrs. the air of a "meeting-house" furnished Adler & Sullivan's Auditorium. In rewith minarets, and that is scarcely spect of architecture the Art Institute, the aspect that belongs to a syna- admirably discreet and quiet and Doubtless a horizontal belt at well-studied in its design, is as unmisthis point is desirable, but the device takably Romanesque as it is unmistak-



YOUTH'S COMPANION BUILDING,

H. W. Hartwell and Wm. C. Richardson, Architects.

Boston, Mass.

Exchange and the Phœnix have the justify the rearing of a taller structure. same quality. By far the best of these Some of the most distressing archifeatures and one of the most artistic tectural results of the elevator have pieces of architecture in the country is been produced in places in which comthe entrance to the Phœnix building. mon sense has been so far overridden by The admirable building of the Pioneer- local pride or personal vanity as to in-Press in St. Paul is an extension rather duce an owner to rear a building twice of the work of Mr. Root than of that as high as is called for by the obvious of Mr. Richardson.

ures of such buildings as the Insurance the value of land must be great to conditions of the town to which it is ex-

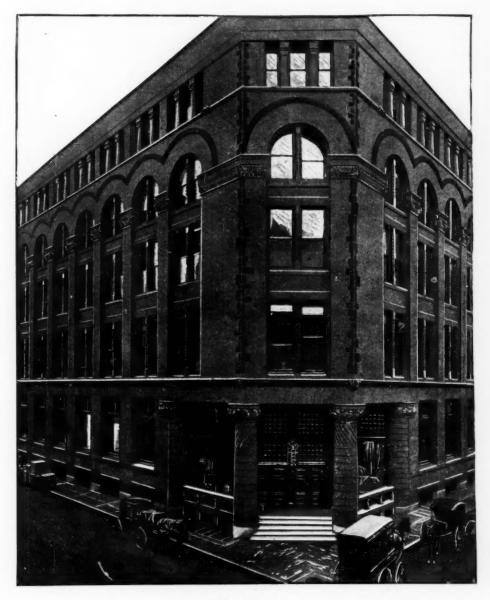


ENTRANCE TO WAREHOUSE,

Boston, Mass.

Peabody & Stearns, Architects.

There is a distinction to be taken pected to be an ornament and upon between the commercial architecture which it is in fact a monstrous excresthat preceded the elevator and that to cence. Such a straightforward and which the elevator has given rise. The practical design as that of the building of limit of commercial building, when the the Youth's Companion in Boston, which elevator is not employed, is five stories, owes most of its architectural effect to its or at the utmost six, and such a build- evident straightforwardness and pracing offers a problem so much easier and ticality would have its difficulties inmore inviting to a designer that he is creased by an addition even of another entitled to congratulate himself upon story, and after that the increase would it. Of course, even a five-story build- be in a geometrical ratio. Here the deing is more commodious and desirable sign consists in the grouping of the with an elevator than without it, and first two stories into an architectural



WAREHOUSE,

Boston, Mass.



DESIGN FOR FINE ARTS ACADEMY,

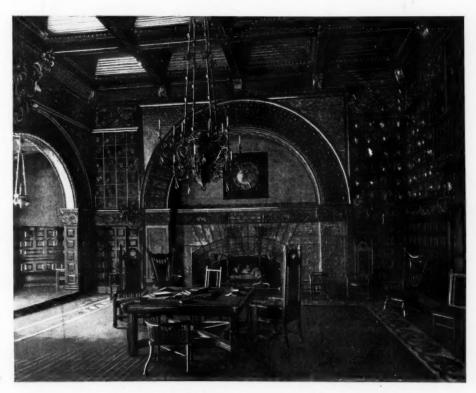
Cyrus L. W. Eidlitz, Architect.

San Diego, Cal.

basement, united by the emphatic string Romanesque character, for the arcades course that separates them from the superstructure, and by the large arched tailed in tolerably consistent Romanentrance that includes them both; in esque, are of a lightness quite foreign the grouping of the next two by the prolongation of the openings, and in the superposition of a light and simple ing example of a Romanesque comattic, while the corners are strongly re- mercial architecture in a warehouse inforced by the widening of their piers built some years ago from the designs

framed between the piers, though deto the style.

Boston contains another interest-



LADIES' WAITING ROOM IN STORE.

Boston, Mass.

Peabody & Stearns, Architects.

relieved in the lower story only by a the architects had the same advantage single arched opening at the centre of of a considerable area and a moderate each. This treatment gives the build- height. The building is of five stories, ing to which it is applied an aspect of which the lowest is given to the that is not only commercial but emi- basement and the uppermost to the nently business-like, but the problem attic, while the three intermediate are here is by no means that presented by strongly bound together into a single the typical American business building division by the prolongation of the of to-day, and in this instance its solu-openings. The piers reserved at the tion is facilitated by a very ample area. angles are ample, and the treatment is It is to the solidity of these cor- of an appropriate severity. The open-

and the solidity of their treatment, of Messrs. Peabody & Stearns, where ners that the building mainly owes its ings of the basement are absolutely



THE PUBLIC LIBRARY,

New London, Conn.

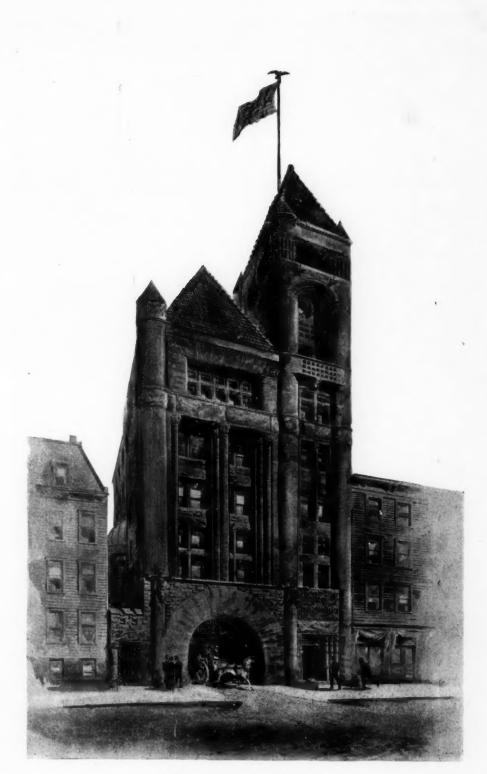
Shepley, Rutan & Coolidge, Architects.



CHRIST CHURCH,

Andover, Mass.

Hartwell & Richardson, Architects.



Brooklyn, N. Y.

DESIGN FOR FIRE HEADQUARTERS,

F. Freeman, Architect.

plain; the decoration of the central its base, in which the use of the colpost of the arches. The attic might per- iveness of the work.

division is very sparing and strictly umns, which might perhaps advanlimited to the expression of the structageously have been made still more ture in the rough labels of the open- sturdy than they are, secures a free ings and the quoining of the angles, circulation without seriously compromand to an effective emphasis of the imising the apparent stability and mass-This feature haps properly have been more lightened seems to have attracted the admiration and enriched, for though it is subdivided, of the designer of the Central Savings the treatment of it is as massive and Bank in Baltimore, in the entrance of rude as that of the basement. In any which its design is reproduced, with case it needs an effective cornice, and modifications, of which the thickening



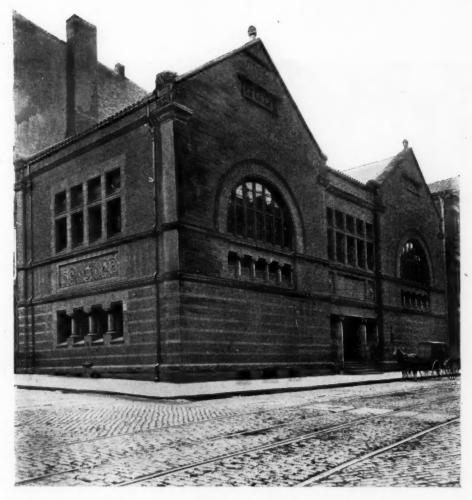
Baltimore, Md.

THE MARYLAND CLUB,

Baldwin & Pennington, Architects.

the more with the baldness of the of the lintel and the shortening of the

treatment adopted, instead of the plain columns are decided improvements, as parapet, with no projection at all, by enhancing the expression of strength which it is surmounted. In a building at a point where that expression is urof which it is impracticable to exhibit gently needed. The Farmers' and Merthe roof, it is the more necessary to chants' Bank, also in Baltimore, a buildsuggest it by means of an emphatic ing which is evidently meant as an excornice, and the omission of it here en- ample of Romanesque, shows again the tails much the same unfortunate failure facility for an effective disposition of expressiveness that would be inflicted which is given by a moderate number upon a human countenance by the of stories, and the general arrangement omission of the eyebrows. On the of a tall and massive basement of three other hand, the treatment of the trun- grouped stories and of an attic above, cated angle, in which one bay of the is well marked and well proportioned, fronts is reproduced, is extremely and it is emphasized by the introduceffective, as is that of the entrance at tion at the angle of a corbelled oriel



THE MERCANTILE TRUST AND DEPOSIT CO.'S BUILDING,

Baltimore, Md.

Wyatt & Sperry, Architects.

running through the main division. It gabled centre of the principal front is is not so happily detailed as to secure a broad, massive and effective piece of all the effect the general scheme prom- design. It will be seen, however, that ises. Indeed, there is no detail which the tower at the angle is not fitted, can be called felicitous, while there is either by its dimensions or by its dea conspicuous infelicity in the intro- sign, to effect its architectural purpose duction of the two-story projecting of uniting and dominating the two sash-frames in the principal division, fronts. an infelicity which is aggravated by their treatment. The Maryland Club, cial buildings of Baltimore is doubtless a building in the white Baltimore the Mercantile Trust and Deposit Com-County marble, by the same designers, pany, though it is only with some hesiequally an example of Romanesque, is, tation that it can be classed as an exas to its detail, a much more satisfac- ample of Romanesque. The short tory example of their skill, and the stout columns of the colonnades are

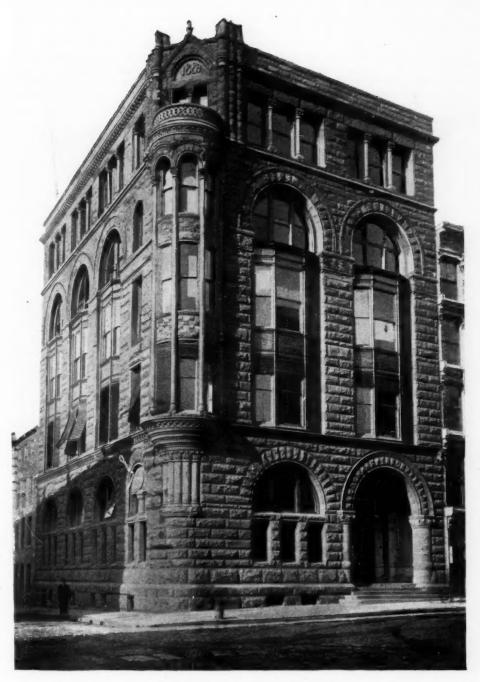
The most admirable of the commer-



Baltimore, Md.

CENTRAL SAVINGS BANK BUILDING,

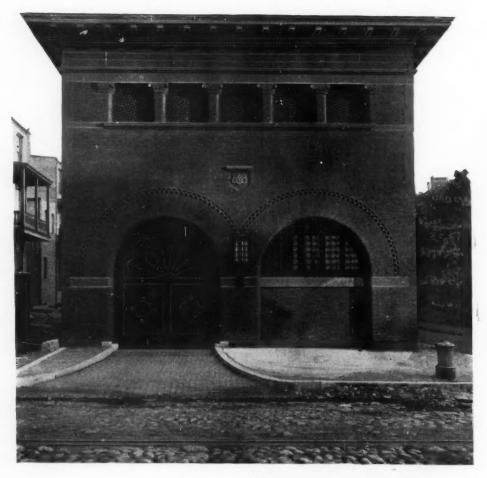
Chas. L. Carson, Architect.



THE FARMERS' AND MERCHANTS' BANK,

Romanesque, and so are the massive its masses and the adjustment of its decolumns of the entrance, in which the tail. One need not know even so much same device we have just seen is re- about the requirements of the building peated, of merging the columns into a as the inscription tells him to be assured

supporting wall without the interven- that these have supplied the basis of tion of bases, and the carving through- the design and that the building is the out is Byzantine. Other detail, how- outcome of them, so straightforward

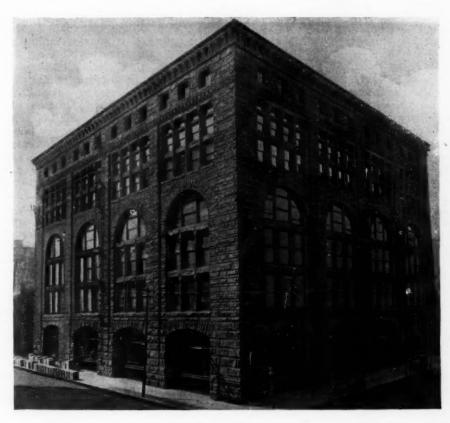


MR. WINAN'S STABLE, Baltimore, Md.

Wyatt & Nölting, Architects.

ever, as that of the openings in the and expressive is the treatment throughgables and the fret of the screen wall out. It is very rarely that an architect in the colonnades, is as unmistakably has the good fortune to design a buildclassic. In fact, in spite of the mix- ing, especially a commercial building, ture of styles, the total effect of the of which a chief requirement is that the building is one of classic purity, by lower stage shall be almost an unreason of the art which has been broken mass of wall; and it is still bestowed upon the proportioning of more rarely that his work shows a

consciousness of his good fortune. The development of the triple division ordinary designer, given a considerable merely indicated in the basement into expanse of blank wall, is apt to show two gabled wings and a depressed even an impatience of it and a desire centre, which is itself much lighter and to "do something" with it. Here the more open in treatment than the flank-basement of the longer front is a wall ing walls. On the side it is avoided by quite blank except for the entrance at the range of four colonnaded openings, the centre, the simplicity and massive- still very massive in treatment, at the ness of which emphasizes instead of centre of the basement, and by the



WAREHOUSE,

St. Louis, Mo.

Shepley, Rutan & Coolidge, Architects.

relieving its expanse, which is further repetition in the upper story of the emphasized by the introduction in its central feature of the longer front. brick-work of narrow courses of stone that not only develop its lateral composition is the intervention of dimension, but increase its apparent the frieze between the upper and strength by the expression of bonding. avoided in the principal front by the successfully studied as the general de-

A continuance of this treatment through into harmonious relation and gives the the superstructure would result in a building an effective triple division vergrievous monotony. This has been tically. The detail is as carefully and

building as Romanesque, upon the ground that it is more Romanesque than it is anything else, though it might nearly as well be called Neo-Grec. It has, at any rate, a high degree of massiveness and simplicity without degenerating anywhere into rudeness or clumsiness, and it is an unmistakably eclectic building, of which nevertheless the predominant impression is of purity. This is an unusual triumph in contemporary architecture. A brick stable in Baltimore, though in comparison a very unpretentious work, shows these same qualities almost in an equal degree, and is almost equally successful in its kind.

It is in "elevator architecture," however, that the test of the applicability of a style to commercial uses must be sought, while it is in elevator architecture that it is most clearly out of the question to produce examples of Romanesque or of any other historical style. It is like attempting to write an essay upon the events of the day in classic Latin. It cannot be done without the use of locutions

"That would have made Quintilian stare and gasp.

One can of course use Romanesque details, and even Romanesque features in unmistakably modern buildings; and one can, if he have skill enough, give a Romanesque character, the character of massiveness and simplicity, of "rest and immobility," even to a modern warehouse or office-building. One of the most interesting essays in this kind is the Limberger warehouse in St. Louis, of which the design was obviously enough suggested by Mr. Richardson's very impressive Field building in Chicago. Like that, this is but of seven stories, and so much more manageable than if it were taller, and it has the further advantage of an ample area, though by no means so great as that of

sign, whether it be the strictly archi- the basement, of which the treatment tectural detail of structural members is almost identical, except that in the and of mouldings, or the strictly decor- later work they are continued to the ative detail, such as the panel in terra ground, in the great arcade of three cotta between the stories at the centre stories next above the basement and in of the side. We may classify this the rugged and almost cyclopean expression of the masonry. The differences are marked and interesting. In the Field building there is no lateral division except what is enforced by the great openings and is recognized above by the piers of the upper arcade and by the piers of the colonnaded attic. This treatment of course emphasizes the lateral extent of the building, and is more appropriate to a building of great magnitude where it is practicable to arrange a series of openings innumerable, or not readily numerable, by the eye, than in a building of moderate dimensions. In the later building, the division into bays is insisted on and marked by a projecting strip of pier which is continued downward from the attic until it merges into the battering basement. The attic of the Field building, in spite of the interruptions caused by the reappearance of the lower piers, is virtually almost a continuous colonnade, while in the Limberger building it consists of three square openings in each bay, and enforces the division below. All these changes may be regarded as due to the changed conditions of the problem in which, the magnitude not being of itself so impressively great, it is the less desirable to make sacrifices to its development; and they do not necessarily imply any It is othercriticism upon the model. wise with the substitution, above the great arcade, of two stories of lintelled openings, four in each bay, for the twostory arcade of the Field building, with openings doubled over each of the larger openings below. Doubtless this change implies a criticism, and the criticism seems to be just, whether or not it has been quite successfully obviated. Without doubt the superposition of the arcades is the least successful point of design in the Field building, since the scale of the upper is not so much less as to make it cooperate with the lower, or seem a subordinate appendage to it, its vast prototype. The chief resem- but allows the upper to assert itself as blances are in the segmental arches of an independent and competing member



Boston, Mass.

AMES BUILDING,

of the composition. The same defect appears in the design of the New York The change of Produce Exchange. motive in the St. Louis warehouse is therefore not a capricious variation, and the two tiers of lintelled openings do not compete directly with the arcade,

building, three openings wide, is framed between wings more massively treated, and each pierced in each story with a single opening much smaller than the openings of the centre. This arrangement allows of the introduction of a store front with supports as attenuated

as a store front demands, but which is saved from the disastrous result that usually ensues from such attenuation, both by the solidity of its frame and by the general massiveness of the treatment. Above this the central division consists of three tall stories, of which the openings of the upper are lintelled, with mullions and transoms, while the other two, though grouped by the continuation of the openings, which are closed by traceried arches, are nevertheless sharply distin-guished from each other by an emphatic transom at the floor line. The feature thus formed, and effectively framed by the flanking piers, evidently consists of three members, of which the uppermost is an effective culmination, as neither the two-story arcade of the Field building, nor the two stories of lintelled openings of the Limberger building can be said to be.

Perhaps part of this difference may be attributed to the greater difficulties of design that a building of seven stories

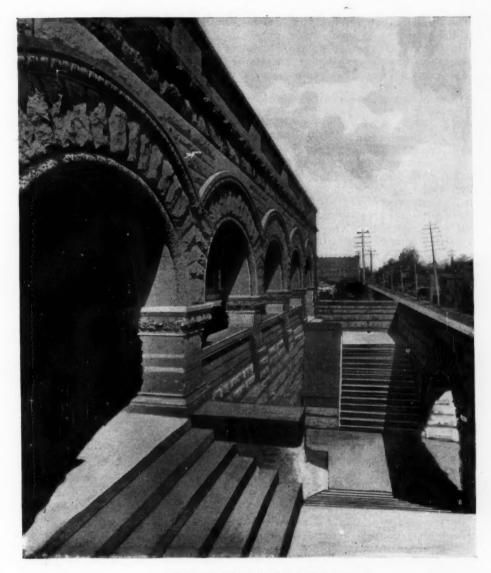
though it cannot be said that they di- presents over one of six. However that may be, it is certain that the to its effect, as would be necessary to difficulties of the designer of an elevathe complete success of the design. A tor building, properly so called, inmore successful composition in this re- crease very much more than directly as spect is that of the Masonic building in its height. The Ames building in Bos-Pittsburg, a front of six stories in dark ton presents one of the really crucial brown stone. Here the basement is of problems of elevator architecture, a building of moderate area and of imof a single story traverses the whole moderate altitude, of which all the



Pittsburgh, Pa.

Shepley, Rutan & Coolidge, Architects.

rectly cooperate with it or contribute two stories, while a tall arcaded attic front, whereas below, the centre of the stories are to be put to the same or very



BOSTON & ALBANY R. R. STATION,

Springfield, Mass.

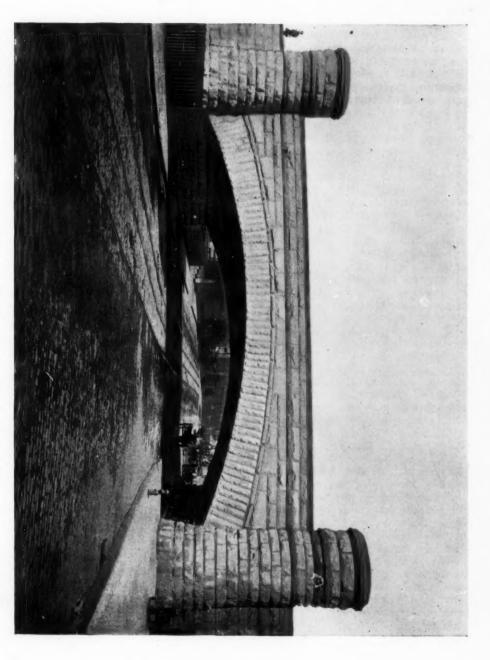
Shepley, Rutan & Coolidge, Architects,

similar uses. So successfully has this light sandstone, which in turn is surcarries an eight-story superstructure of whole with brilliant success. Nothing

problem been solved in the Ames build- mounted by an arcaded attic and a coring that this edifice has been chosen by nice of very great projection, an inci-Professor Kerr, in his continuation of dent of which is still another story. Fergusson's "History of Modern Archi- With a fourteen-story building, on a tecture," as the typical specimen of site of not much more than 6,000 feet American elevator architecture; and it in area, a tower-like treatment is absowould be hard to make a better choice. lutely enforced; and such a treatment A three-story basement of light granite has been carried out here, upon the could well be happier than the design in mass and in detail, and perhaps the of the basement, in which the designer most successful example in the country had the advantage of one story con- of the adaptation of Romanesque archisiderably more important than the tecture to an extreme requirement of others, and which of itself has an unmistakable and harmonious triple division. Nor does the treatment of the upper and architecture is very modern, and member of the composition leave any- it really applies less to the character thing to be desired. In such a building, than to the classification of the works where it is impracticable to exhibit the which are by custom allotted to the actual roof, the summit, as all archi- practitioners of these arts respectively. tects of successful spireless towers have found, must be strongly marked on an untrustworthy soil is a problem and the roof that cannot be shown involving as much mechanical knowlmust be suggested; and here this purpose is admirably attained by the neering works. Engineering, like archispreading cornice. The central and tecture, is the art of building, but in chief division, the shaft of the tower, modern practice it is the art of building so to say, is not only justly and effectively proportioned to its supporting utility, and of which the owner does and to its crowning member, but it is not much care how they look, though very effectively framed between the of course there is no reason why a plain and solid corners that give an as- bridge should be less a work of fine surance of strength and stability. In art than an office building. the design of the stories thus fortified within a few years all structures perthere arises the same difficulty that taining to railroads were allotted to we have noted in the Field building engineers as a matter of course, except and in the Limberger building. The motive of the latter has been adopted here, and an arcade of five stories carries three stories of lintelled openings, with the effect less of a combination than of a competition. We may grant that an identical treatment of eight stories would be intolerably monotonous, though with the variety secured here by the treatment of the basement and the attic that does not seem quite certain. At any rate, in a building there is an increasing tendency to inthat has a general triple division, the trust the design of stations to archisub-division of one of the principal tects. divisions into two masses, of which one is not a mere appendage to the other, seems an error. At least the result of it is not completely fortunate in any one of the three buildings in which we have been considering it. If the predominant member of the composition must be sub-divided, it seems that it must again be triply sub-divided like the whole into a beginning, a middle and high architectural interest, of which an an end of its own, as is so effectively illustration is given. There is an inand dignified work, equally admirable ing work, but it is evident how greatly

"elevator building."

The distinction between engineering The erection of a twelve-story building edge and consideration as most engistructures which are works of bare in the case of important city stations where architects were called in to furnish exteriors to the works of engineers, and where we may see the structures which the architects were not enough constructors to be intrusted with adjoining the structures which the engineers were not artists enough to be intrusted with, with an effect of much confusion and incongruity. Although this practice is by no means obsolete, As we have seen with regard to the Mott Haven station at New York (Architectural Record, No. 1, p. 25), and as many other instances might be adduced to show, this practice has resulted in great benefits to people who care about architecture. One of the most striking of these instances is the station of the Boston and Albany Road at Springfield, a group of buildings of done in the front of the Masonic build- herent ferce in the long and low and ing at Pittsburg. The defect thus in- sturdy arcade of the porte-cochère that dicated does not prevent the Ames it could not wholly have lost if treated building from being a very impressive with the baldness of ordinary engineer-



Springfield, Mass.

BRIDGE OF BOSTON & ALBANY RAILROAD,

Shepley, Rutan & Coolidge, Archiects.

by the careful proportioning and ad- of the treatment, perfectly appropriate justment of the parts, by the definition to its purpose, might not have been of the impost and of the arches, and mitigated with advantage in the paraby the sparing but effective decoration pet. This is in fact merely a screen, which helps to express this arrange- and as such its only requisite is that it ment; and these things are the fruit should be opaque. By giving it an of a strictly architectural training. A aspect of great weight and massiveness, still more noteworthy example of the it is made to increase the apparent advantages of this training is furnished load upon the arch, and in consequence by the bridge that carries the railroad the apparent thrust against the abutover a street, and that belongs to the ments. But that the design of a railcategory of works usually relegated by road bridge should tempt one into members of the flanking turrets, but the whole force of the work resides in the disposition of the masses which again merely expresses the facts of structure. An arch of 70 feet span with so slight a rise as this obviously needs for its stability voussoirs of great depth, and the great depth of voussoir, which so often appears a merely capricious exaggeration, is here seen to be neither a caprice nor an exaggeration but the simple and straightforward response to a real requirement of the structure, while the single unmoulded course at the extrados serves to define the arch. Another obvious low is an unusually ample abutment. This abutment is doubtless in fact provided by the prolongation of the wall, but it needs to be expressed and emphasized to furnish a visible guarantee of the sufficiency of the abutment and the immobility of the arch. This is the purpose that is served by the turrets. Perhaps it might have been even better served if these flanking masses had been rectangular instead of curved in plan, for as we have already seen, a circular base has not the same aspect of rigidity as one that shows corners. The poet knew what he was about when he likened his hero to a

"Tower of strength Which stood four-square to all the winds that blew.

him to a round tower. It is question- Trinity Church, Boston, remains one of

this impressiveness has been heightened able, also, if the general ruggedness common consent to the engineer. It these minute criticisms is in itself a is here still more noteworthy because testimony to the immeasurable superihere there is no ornament, not so much ority of the work so criticised as a as a moulding except in the upper work of art to the usual works of its class, and really an additional tribute

to the success of the design.

In city houses throughout the country the influence of Richardson has been perhaps even more marked than in any other class of buildings, but in most cases it has operated by the unprofitable method of direct imitation, and has consisted in fastening "features" from his work upon buildings of inconsistent physiognomies, or no physiognomies at all, which is much as if one should attempt to make up a countenance from a collection of mouths and eyes and noses, "by taking the best parts out of divers faces to requirement in an arch so broad and make one excellent," as Bacon accused Albert Durer of doing. Such a procedure no more leads to ideal beauty in architecture than in painting. There are doubtless many single dwellings of which the designers have been inspired by Richardson's work to do something good in the Romanesque spirit, but in their own way. Summit avenue in St. Paul, the north and the south sides of Chicago, and Mount Vernon square in Baltimore furnish interesting examples, and in the last-named city Mr. Cassell has attempted, with a considerable degree of success, a row of dwellings of moderate size and pretensions, of which the spirit is undeniably Romanesque. In many of Mr. Richardson's own city houses the Romanesqueness is carried much further than a consideration of what ought to be the and would by no means have produced aspect of an American city house in the same effect if he had compared our day would warrant. The rectory of

the most interesting of his essays in Massachusetts, the photograph of this department, and it is the more in- which one would be likelier to take for teresting and suggestive because, with a chateau of the twelfth century in all its spirit and picturesqueness, it is Languedoc than for the residence of a still a decorous and well-behaved city "railroad magnate" in our prosaic house, a residence suitable for an time, and in matter-of-fact Massa-American gentleman. While the imi- chusetts. But there can be no doubt tators have been at it, it is rather sur- either of the satisfaction with which a prising that they should not have imi- sensitive American architect must hail tated much more extensively the device such an opportunity, or of the satisfac-



Near Baltimore, Md.

RESIDENCE OF GABRIEL DU VAL, ESQ.,

Wyatt & Nölting, Architects.

in a country house it is doubtful ers of country houses. whether many architects have the good and picturesque country house in tent to which the Romanesque revival

of withdrawing and sheltering the tion with which a sensitive American obsteps and the "stoop" behind the front server contemplates the use that has wall, a device which is as sensible and been made of it. A much simpler and practical in our climate as the archi- smaller and more conventional country tectural outcome of it is here effective, house near Baltimore shows the In a country house much more of fan- applicability of the style to the more tasy can properly be indulged, but even usual problems of the American design-

Such an array of buildings in so fortune to fall in with clients who desire many different kinds, some admirable, these dwellings to wear a really Roman- many suggestive and nearly all in some esque aspect. One such is evidently degree interesting, constitutes at once the owner of the massive and rugged an impressive demonstration of the exthe future it may go further and fare architects had previously taken as the

has already gone, and a promise that in the building of any style which our better. What we have called the Rich- point of departure for a "movement,"



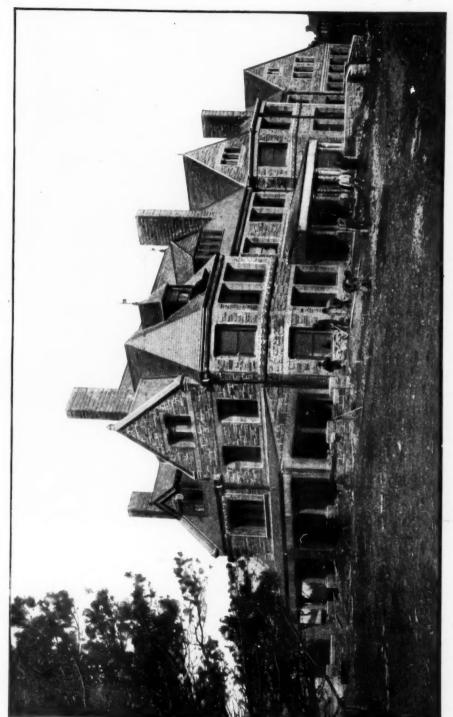
COUNTRY HOUSE,

Dedham, Mass.

Shepley, Rutan & Coolidge, Architects.

ardsonian Romanesque has for the most excepting only the Gothic revival. That part been done within the past five an architect must build upon the past since the death of Mr. Richardson him- that if he means to produce an artistic ing architecture, architects who rerivals were naturally loth to introduce in a design dispositions or features or details, of which the suggestion plainly came from him. Since his death has "extinguished envy" and ended rivalry the admiration his work excited has been freer to express itself either in direct imitation or in the adoption and elaboration of the suggestions his work illustrations of both these processes.

years, within the years that have elapsed is plain enough. It is equally plain self. While he was living and practis- result, he must select, as a starting point, some phase of past architecture garded themselves as in any degree his in which a definite style, "a consistent system of construction and decoration," has already been attained. Rightly construed, this apparent limitation is not a real limitation. It does not forbid eclecticism, as we have seen in several of the most interesting works illustrated in these papers; it requires only that eclecticism shall be so conducted as not to impair the impression furnished. These pages have furnished of artistic unity, of style, of "a consistent system of construction and The body of Romanesque work in this decoration." One may compose well country is now more extensive, and in any style that fulfills this definition, upon the whole more meritorious than and may add to it details and features



Newport, R. I.

RESIDENCE DESIGNED FOR THE LATE MISS CATHARINE L. WOLFE,



Pittsburgh, Pa.

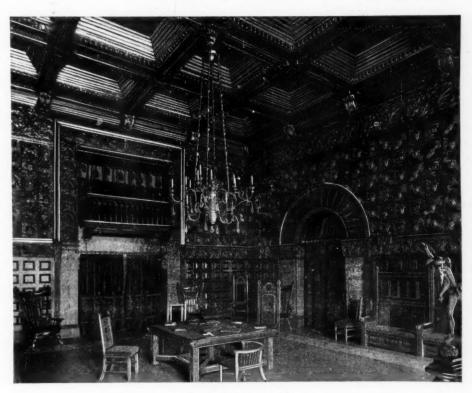
STAIRCASE IN COURT HOUSE,

H. H. Richardson, Architect.

like a language is dead when it ceases ure.

which the past practitioners of the style or verse in Volapük. Nor is the selecdid not use, just as one may write well tion of an historical style as a startingand purely in any language without point inconsistent with life and progconfining himself to the vocabulary of ress, provided the style chosen be in its classical literature when he has itself rational and consistent, and prosomething new to express. A style vided it be chosen as a point of depart-The style which has prevailed to grow and change. This is a very throughout continental Europe for three different thing from a hodge-podge of centuries is not such a style. It is not eclecticism which attests either the a consistent system of construction and eclectic's ignorance of "styles" or his decoration, because it uses one system insensibility to style, or both. We do of construction as the decoration of not look for any masterpieces of prose another system of construction. It is sible until it is freed of its inherent self." The reason is not very far to contradictions. The Romanesque build- seek. In the hands of all but its

essentially the "classical or transitional much earnest and intelligent and some Roman," and no progress in it is pos- brilliant work, it failed to "impose iters, as we have seen, freed it of its constrongest practitioners the American tradictions, giving the antique column a variety of Victorian Gothic became a function to perform in an arched con-thing of shreds and patches, of which the struction, and discarding altogether the effect was so uneasy that the judicious antique entablature. The French observer was often led to wish that architects have, indeed, made essays the incompetent designer had remained



WAITING ROOM IN STORE,

Boston, Mass.

Peabody & Stearns, Architects,

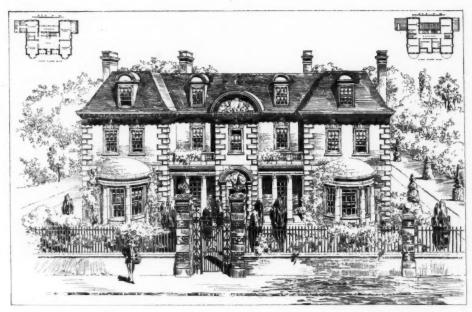
as in the omission of the orders in can Renaissance. The expression even such a building as the library of Ste. of the historical masterpieces of Gothic Genevieve, or as the reversion to a lin- art, doubtless the most wonderful and telled construction in such a building intellectually the most admirable of as the Faculty of Medicine, but these all the works of man in the art of isolated exceptions emphasize the rule building, is the expression of ideas and of irrationality. For our purpose the sentiments that do not belong to our

towards rationalizing their official style, in the comparative safety of the Americhoice of a point of departure may be time. Mr. Moore contends, with much taken to lie between the two phases of force, that the only truly Gothic buildmediæval architecture. The Gothic ing is a fully developed cathedral; we have already tried, and in spite of and indeed it is evident that the vast

ment, for development. or thus far in the revived Romanresort to Gothic precedents, and withof Romanesque as we know it, where movement that has yet appeared.

repertory of detail and of ornament these qualities are required. It is not which Gothic architecture has be- by any means a question of pointed queathed to us was very largely de- arches or round. History shows veloped from the buttress-system of plainly enough that the pointed arch which the cathedral was the perfect was introduced, not at all because the and typical example. Romanesque is, designers who introduced it preferred indeed, not applicable to all our needs. its form to that of the round arch, but It is essentially and almost exclusively because they needed it as a constructan architecture of stone-work. It fur- ive expedient in the development of nishes no precedents for timber con-struction, and very few for brick-work, nished by the many transitional buildsince a building in which brick is used ings of which the builders used round merely for the fields of wall, and stone arches where they could and pointed for the features, is not an example of arches only where they must, and the an architecture of baked clay. Never- apertures of the walls were at last theless, Romanesque may be com- pointed only in order to conform to mended as a point of departure the structural arches the form of which for modern architects precisely be- was determined by their function. We cause it has never reached its ulti- are no longer bound by the exigencies mate perfection, as Gothic did. There of a vaulting system, and the developis not in the world what may be called ment of Romanesque in the direction completely typical specimen of of elegance and refinement, which is Romanesque in the sense in which there the one thing needful to adapt it to all are completely typical specimens of that we require of an architecture in Greek Doric or of French Gothic. In masonry, need not take again the this there is still room for improve- same direction which it took in the As the be- thirteenth century. A too literal adsetting tendency of Gothic is to ten- herence to Romanesque precedents on uity and complication and unrest, so the part of a modern architect does the besetting tendency of Romanesque not, as we have seen, reproduce the is to clumsiness and crudity and rude- effect of simplicity and naïveté that is ness. Where mass and weight and made by the work of the early Ropower are to be expressed it leaves manesque builders who were working nothing to be desired, but we can towards the solution of problems which scarcely point either in the original their successors solved, and of which we know the solution. What was esque, to a design that can fairly childlike in their work is childish in be called "elegant." Yet elegance is ours. It is by beginning where they a quality as suitable for architectural left off and not where they began-by expression as force, and no style can taking their work as a point of debe accounted complete until it is ade-parture and not as a point of arrival, quate to every expression. It is in that the architects of our day can this direction that modern architects create the beginnings of a true and may develop Romanesque into the ele- living architecture, such as for four gance of later Gothic, without direct centuries the world has not seen. The Romanesque revival in this country is out losing the vigor and massiveness the most promising sign of such a

Montgomery Schuyler.



London, Eng.

RESIDENCE,

R. A. Briggs, Architect.

WHAT IS ARCHITECTURE?



authorities:

"The art of building specifically of fine or beautiful building. Architecture includes, in the widest sense-(1) the principles of design and of ornament

as applied to building; (2) the science of construction, including the properties of materials and the methods of combining them; and (3) the practice of construction, including estimates of cost and the directing of builders and workmen. The practice of this art requires skill in design, which is the special province of the architect, and skill in execution, which is the special province of the workman whom the architect employs and directs. It is the function of skill in architectural design to combine in a harmonious scheme the independent and often hostile requirements—(1) of use and convenience as dictated by the conditions of the problem in hand; (2) of constructive necessity and fitness as determined either by practical experience or by scientific theory; and (3) of artistic excellence in the proportions of the parts and in the decorative treatment of details, in accordance with either principles and canons of good taste or the prescriptions seen."—Encyclopædia Britannica.

RST let us marshal the of custom or tradition. It is the function of skill in execution practically to carry out the scheme so designed; and this skill is exercised by draftsmen, surveyors, mechanics, artisans and artists, each in his place. Architecture is properly distinguished from mere building by the presence of the decorative or artistic element."—Century Dictionary.

" Architecture is the art of building according to principles which are determined, not merely by the ends the edifice is intended to serve, but by considerations of beauty and harmony. It cannot be defined as the art of building simply, or even of building well. The end of building as such is convenience, use, irrespective of appearance; and the employment of materials to this end is regulated by the mechanical principles of the constructive art. The end of architecture as an art, on the other hand, is so to arrange the plan, masses and enrichments of a structure as to impart to it interest, beauty, grandeur, unity, Architecture thus necessitates the power. possession by the builder of gifts of imagination as well as of technical skill, and in all works of architecture properly so called these elements must exist and be har-moniously combined. The greatest works of the architect must always be those in which the imagination of the artist is most plainly

" Architecture is the art which so disposes and adorns the edifices raised by man for whatsoever uses, that the sight of them contributes to his mental health, power, and pleasures. It is very necessary, in the outset of all inquiry, to distinguish carefully between architecture and building."-Ruskin,

"Ornamentation is the principal part of architecture. That is to say, that the highest nobility of a building does not consist in its being well built, but in its being nobly sculp-

tured or painted."-Ruskin.

"The proper definition of architecture is merely the art of designing sculpture for a particular place, and placing it there on the best principle of building."-Ruskin.

"Architecture is nothing more or less than the art of ornamental and ornamented con-

struction."-Fergusson.

"The forms of combinations in all styles of architecture are but so many means of suiting the climate and country in which they are used."-Gwilt.

" Architecture, the art of building, includes two elements, theory and practice. The former comprehends the fine art side proper, the body of the general rules inspired by taste and based on tradition, and the science which admits of demonstrations by means of invariable and absolute formulas. Practice is the application of theory to particular needs; it is practice which causes the art and the science to conform to the nature of materials, to climate, to the customs of a period, or to the necessities of the occasion." - Viollet-le-

" Architecture is the art of construction according to the principles of the beautiful."

Blane

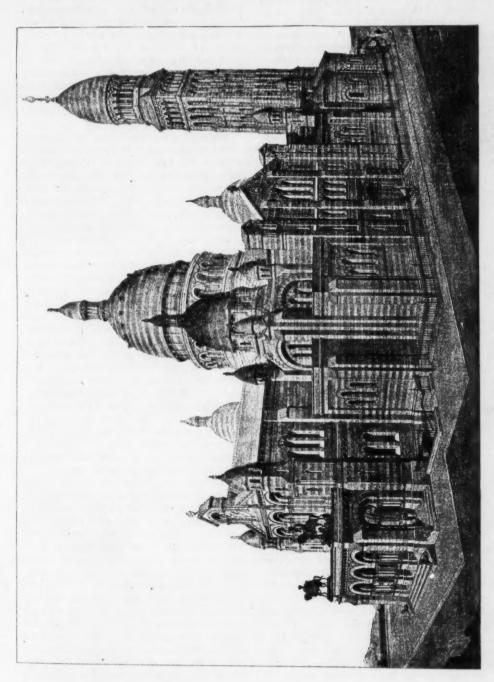
"The attentive study of the architecture of the different people of antiquity shows us in an unmistakable manner that what we call the style and character of the architecture is not only determined by the taste and needs of the population, but is influenced even by the nature of the country in which the ancient architects exercised their arts."- Texier and

A truly astonishing variety which it would be easy to extend, but these are ample evidence of the opinions of the doctors, thus reflecting, in a degree, the of vision, unless forced to do so by opinions of lesser folk whose opportunities for forming a judgment on such the present day we do not build a subject is more limited than those monumental structures to feast our is a difficult one, and it is especially so practices and needs.

essayed to define the word have solved the problem by either limiting it to beautiful work or to that in which beauty or ornament-two terms apparently closely united, but frequently thoroughly opposed to one anotherare included. Mr. Fergusson, whose enormous popular following is only exceeded by his general untrustworthiness and unsuitability as a chronicler of architectural history, took the trouble to illustrate his definition by a diagram. at one end of which was a structure whose hideous plainness was much like an ordinary factory, and which through a series of applications of various quantities of ornament and decoration was transformed, at the other end, into a palatial facade of truly amazing pro-This was architecture: the other stages of the progression were buildings or constructions.

No distinction could well be more misleading, and it would have been hard to have composed a more artificial definition. It is true there is an impression among general readers and observers, as well as specialists, who should know better, that if architecture is not ornamental or ornamented building, it is not far from it. Ruskin, for example, has devoted much of his life to the composing of definitions of architecture, and has propounded some of the most extraordinary and fanciful conceptions that have been given to the world, yet every one of them is but the expression of his own ideas, his individual impression, the statement of what he thinks

architecture is or should be. The fact is, the definers of architecture base their definitions upon what they see around them. They are fascinated by the great monuments of architectural art and refuse to admit anything unpretentious into their field the paucity of other memorials. who have made architecture their life eyes upon, but many writers obviously work. At the best the art of defining compile their definitions upon modern The complex in a subject embracing so many differ- conditions of the day lie at the base ent elements as architecture. As a of their meanings, not the historical matter of fact, most of those who have associations or the story contained in



morial ages.

Architecture is the most ancient of the arts. Not as we know it, not as it was practised in ancient Egypt or Assyria, or even in the stupendous monuments of ancient India, of unknown age and origin. If "architecture is the art of building according to principles which are determined, not merely by the ends the edifice is intended to serve, but by considerations of beauty and harmony, then indeed is its origin recent and its state of culture the highest type of history comparatively modern. But the structures in which beauty and harmony are considered are the successors to other structures into which these elements do not enter or in which their influence can only be traced in a rudimentary degree. The houses and buildings that line our streets to-day are the legitimate successors, or descendants if that be a better word, of the huts and "lean-to's" erected by not actually survivals from a primeval primitive man in the primeval forest. In other words, the complex modern office buildings or dwellings with all their harmony and beauty, their ornamental and ornamented construction, their contributions to the mental health, power and pleasure of man, with whatsoever other qualities the imagination of the artistic critic may suggest, fulfill the same function in modern life, perform the same duty in modern society as the hut does for the rudest savage in the lowest stage of humanity.

a beginning; it could not have originated in any known edifice, because if tive architecture is the total absence of the date or time of its erection is not known, the skill required in the construction of any structure that has survived from a distant past is sufficient to show that some earlier experience must have preceded it. Those, therefore, who search the sands of Egypt, the architectural work of men are deluding themselves with a false idea. It may be possible in one or the other of these fearful shelter. The origin of architecture of rough logs or branches, tied at the

the record of the art from imme- must be sought in prehistoric, not in historic times, and the conditions there found must explain the meaning of the word, the nature of the art. Its earliest stage is not its most useful because it is not the most developed, but no definition can be accepted, no meaning adopted, which will limit the art to its latest form and make a natural product the plaything of the imagination of civilization.

Were all men now living in the happy white race has attained, it would be quite hopeless to look for the beginnings of architecture or to find anything but a relatively advanced stage. Fortunately, many primitive forms of existence have survived intact to the present day in the savages who form a very considerable part of the population of the earth, and even if the customs and ideas which they exhibit are age, they are not less primitive in conception and employment. The early history of all phases of life has received fresh and abundant illustration from researches conducted in the primitive life of the present, and though it can never be ascertained how close this reconstructed life approaches the reality. it throws much valuable light upon the beginnings of the human intellect. And as we look for the origin of manufactures and institutions in these early records so the origin of architecture Like all other things, architecture had must be sought in the same source.

The first thing to be noted in primithe harmony, beauty and ornament which make up a large part of modern building. The struggles for existence with which primitive man had to contend were too severe for him to spend time on anything but actual necessities. If his shelter had any idea at all it was mounds of Assyria for the earliest to be useful, and nothing more was expected. Indeed, how could it? With few mental powers, with an active but imagination, with localities to find the earliest known his- mechanical means and appliances, he torical monument, the earliest structure had to do the best he could. Somewhose history can actually be traced, times he took a strip of bark from a but not the earliest feeble attempts tree, sometimes gathered a heap of man made in providing himself with leaves; the cave was palatial, the hut

top by a twig and covered with leaves, ancient art in the valley of the Nile is a miracle not less amazing to his undeveloped mind than the dome of S. known to be later. There are ample Sophia to the cultured Justinian. It is prehistoric remains in Europe, but nothquite unnecessary to trace the successive steps in architectural evolution. Whatever it may be now it certainly began in expressing a use, in performing a service, as an actual necessity. Shelter of some kind was as needful to man as the gaining of food. It was natural to eat, it was equally natural to seek shelter, and if Nature did not herself provide it in the way of convenient caverns or accessible hollows in trees, it was necessary to secure it by artificial This was accomplished, not by the exercises in the elements of beauty and harmony, nor with a soulful longing for mental benefits, but by a forced adherence to the requirements of use and limitations of the materials at hand and the climate conditions. In other words, architecture originated in utility and the environment.

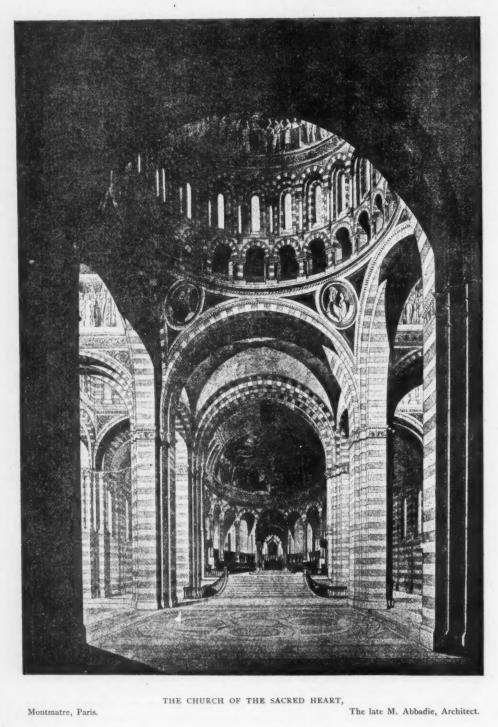
It did not long remain within these confines. Even in primitive society the influence of other ideas can be seen. As society progressed, as mankind spread out in fresh directions, as new conditions arose, the changed circumstances found their reflection in archi-Architecture became in a measure, if not altogether, the product of the environment, grouping all external phenomena under this one head. acting through the mind of man. The evolution was not unconscious, man did not act as a blind agent in the hands was needful in the making of any architectural work, but with the exception of this variable element the evolution of the art has not been less marked than the evolution of society, or of any form of culture. Culture and architecture have not always advanced simultaneously, but both have progressed towards one ideal; to an extent they are coördinate factors. The individual element which is feebly to be traced in primitive erections increases immensely in volume when we cross the border line between the primitive and the ad-

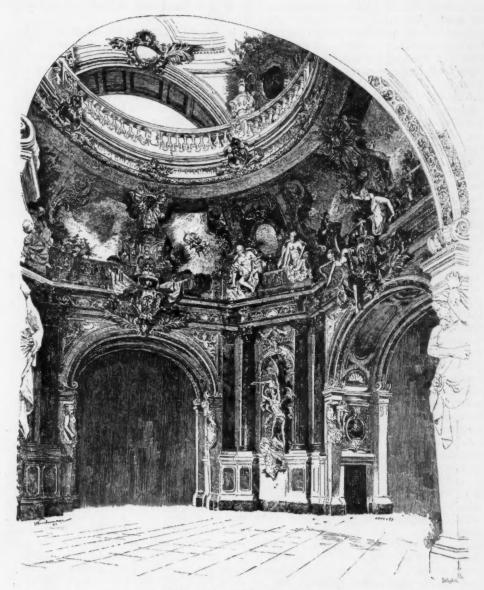
sometimes more advanced than that ing that throws any light upon the be-

ginnings of architecture.

Historic architecture shows in an anpreciable manner the influence of the imagination. No human work could be expected to do otherwise, and with the increasing influence of this element architecture reaches a fresh stage in development. Yet it is slow to forget the associations of its birth. The new elements of beauty and ornament take a more and more increasing part, but it still expresses the factors which correspond to the natural environment in early times. Materials, politics, government, society, natural products of the locality, climate, and innumerable other elements affect the formation of an architectural style. It is not always possible to trace the influence of all of these in many buildings, but in the great styles of antiquity and the Middle Ages they are thoroughly active. They direct the evolution of architecture; they do not hinder it nor do they render the art of these epochs different from that of primitive times save in the matter of the imagination and constructive detail. Architecture expresses a human idea. a human thought, the state of society, the progress of culture. It may be beautiful and ornamented and suggest all manner of delightful ideas, but it is still the product of a natural evolution. it still answers the requirements of of the evolutionary force; his intellect mankind, it is still a useful art and a necessary one.

The most intellectual occupation of mankind is the enjoyment of the products of his imagination. The more complex the products, the higher the culture required for their full absorption. Not every mind can appreciate an opera by Wagner nor a painting by Millet, yet it is in the creation of these works that civilization finds its fullest expression. Architecture, as the product of the imagination, as the idea of the artist, as the combination of beautiful parts, as ornamental and orvanced, the prehistoric and the historic. namented construction, has no more The oldest architecture affords no com- real reason for its existence than an fort to the historian, for the most amateur's water-color or a spring poet's





VESTIBULE OF LEHRTER BAHNHOF,

Berlin.

Kayser & v. Grossheim, Architects.

on such principles. It is quite well tion. enough to view architectural art through

tory on the other.

ronment. times in which they were built, because they are the exponents of two different civilizations, because they are the prohuman hands. These buildings would outcome of the imagination of two particular architects; they are not less reand express universal ideas.

which produces the church, the civic edifice, the house, the château, the shop, the warehouse. Each grade of imaginary year I. to the present day. building, it might almost be said each class, is called into existence through of these operations is distinctly valuorigin, its own use, not by the imagined functions, as does the cathedral or the ancient but the most human of arts.

last poem. The architectural monu- castle. It is not the same idea nor the ment is too cumbersome to be stowed same function, but there is no greater away in a museum, but no better fate error than the confounding of them all is suitable for a building constructed under one head and scheme of defini-

It is well that our buildings should the delicate fancy and brilliant imagina- be harmonious, beautiful, ornamented, tion of a Ruskin, the positive individu- that they contribute to our mental ality and self-assertiveness of a Fer- health, power and pleasure, but it is a gusson, or even in the light of more false limitation to use these terms in modern and less professional lexicog- telling what architecture really is. It raphers, but these are pleasant exer- is equally erroneous to raise the discises of the imagination, neither rest- tinction between building and archiing on truth on the one hand or on his- tecture, as Mr. Ruskin and a host of lesser lights do. This fallacy is one of As a matter of fact, far from detract- the most popular at the present day, ing from the interest or value of archi- and is found even in technical journals tecture, to view it as a result of a natural who define themselves as devoted to evolution instead of as the exclusive "architecture, building," etc. It is a outpouring of the human imagination, it most admirable way of relieving archiadds very greatly to it. Architectural tects of the burden of unsatisfactory beauty is not dependent upon looking at structures to represent them as the a building as a design, the individual work of the builder, not of the archithought of the artist. It detracts noth- tect. In modern usage there is a coning from a structure to view it as the siderable difference between the two result of circumstances or of the envi- persons and the two occupations, but The Parthenon at Athens, there should not be. This is largely the cathedral of Notre Dame at Paris, owing to the fact that people do not are not less wonderful and impressive know what architecture is, of what it because they express the thought of the consists, what it means. They know they live in houses, that the building of a newspaper edifice is the signal for at least one organ of public opinion to go ducts of circumstances not less than of into ectasies over the products of modern architecture, but this is all. still be marvellous had they been the Construction, the technical operations of wall building, occupy the public mind to the exclusion of almost all else. markable because they represent epochs Writers and lecturers on architecture very largely confine their attention to And as with great monuments so the cataloguing of the structural elewith small ones. It is a different spirit ments of buildings, describing their æswhich produces the castle than that thetic qualities as interpreted by the writer or speaker, and preparing chronological tables of buildings from an

Architecture is more than this. Each special circumstances. Each must be able, but they are not always underjudged by its own standards, its own stood, certainly not always appreciated. They relate to superficialities and show rank of another nor by an artificial the art by itself, apart from the standard of taste based on the popu- thoughts and the times that made it. larity of some critic. The shop and No art has followed man from his the warehouse, the château and the origin to his present state as closely as dwelling express ideas, perform useful architecture. It is not only the most

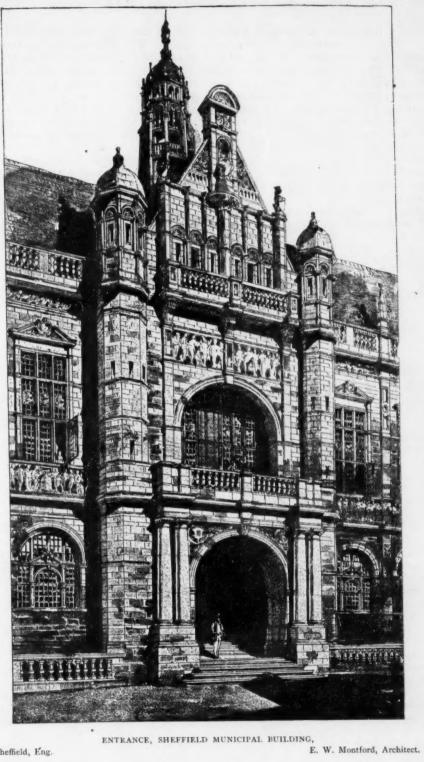


With each successive step forward man made it advance likewise. It reflected unending delight to the esthete if an his life and his thought, and in some art of beautiful building could be deepochs, as in the Middle Ages, it was vised in which nothing but the beautithe sole means through which he could ful and magnificent would be admitted, give expression to his intellectual feel- but such a limitation of architecture ings. It became beautiful, harmonious, would be thoroughly artificial and conand ornamented through his deliberate trary to history. the first form was exclusively useful.

produced in the beginning of this dis- architecture, and those not possessed cussion have been brought forward to of these sacred characteristics someshow the great diversity of opinion as thing else. Such a division is not only to the nature of the art among lead-unnatural and untruthful, but the ing critics and authorities. It is obviously impossible to examine them architecture and building, is detrimenin detail in the narrow scope of a tal to the art. It gives an exaggerated magazine article, nor can the varied importance to the one, an unnecessary conditions which form and affect archi-slight is put upon the other, and, which tecture be reviewed with sufficient care is much more important, the ornamental to permit the formulation of a defini- parts are frequently detached from the tion. M. Blanc found it necessary to constructive, and instead of expressing devote a considerable portion of a large the construction hide it as something volume to explaining the nature of that should not be visible. Architectarchitecture, and it is obviously impos- ure, therefore, comes to be looked sible to attempt a similar work in these upon as an artificial product, the result has played in human history, and it human needs and circumstances. issue. It is quite a needless assumption architecture can only be the result of the highest civilization." Architecture, ing, and, to tell the truth, even the affects or should affect its erection. definition that Mr. Fergusson prepared the present day.

It would doubtless be a source of Human beings are choice; it was not so originally; these not called men simply because they are characterize a developed state of which good looking, but to do so would be no more senseless than to call all orna-The definitions of architecture re- mental and ornamented buildings recognition of two classes of structures, All that can be done here of the architect's imagination, a work is to briefly indicate what architecture of beauty, not as the outcome of the is by showing its origin and the part it application of human resources to cannot be unsafe to maintain that the artificiality of modern life is eminently facts grouped under these heads must conducive to the furtherance of this be trustworthy and infallible guides to unnecessary division, yet it should not the true explanation of the question at be forgotten that this is the environment of modern architecture, and in of superiority to assume with Hittorf meeting it as best it may it is performthat the "art of building is found ing a task identical to that it accomamong the least civilized people, while plished in expressing the less restricted environment in which the structures of past times were erected. The environeither as a fine art or as the product of ment is not the securing of a pleasant constructive skill, has nothing to gain location for a building, but the comby being limited to the last new build- bination of every circumstance that

Viewed in this light architecture bewith such elaborate care fits perfectly comes a natural art with a wider, many structures of primitive people, broader field than it is possible to have which are often highly ornamented, not under the narrow definitions of the with the ornament of civilization, but text books or the fanciful conceptions with rich and varied decoration that of the critics. It does not degrade the performs the same function in the art to include all manner of structures savage canon of art that the most within it, nor is it necessary that the polished and refined ornament does in historians from this standpoint should the hands of the most skillful artist of confine their researches to the investigation of unornamented structures, as



footing.

in the past they have limited them- out, as has been said, undertaking this selves to the beautiful. Neither will task, it may be well, in conclusion, to architecture lose any of its fascinations point out two conditions a satisfactory by being considered akin to nature. definition must fulfill: First, it must Much, valuable light cannot fail to be not ignore the history of the art and thrown on its nature and history by relate only to the structures of a limviewing it from the natural standpoint, ited time or erected by a small number not, as heretofore, from that of the of people; and, secondly, it must be critic or the chronologicler. Nothing general enough to be independent of has ever yet been gained by the ignor- the mental state of the inquirer, his ing or the concealing of the truth, and personal feelings or tastes, his peculiar architecture has nothing to fear by predilections or imaginings Architectbeing placed on its natural and actual ure is a general art, affecting all men and characteristic of all ages. Any On this basis alone can any definition definition or explanation of it which of architecture be formulated. With- ignores these facts fails of its purpose.

Barr Ferree.





WHAT IS ARCHITECTURE? - A LAYMAN'S VIEW.



that it is about as diffidefinition of Architect-

bright epigram: the man who attempts either plays considerable hazard with his reputation. One is quite prepared to But when, like the Hebrews of old, we find the conflict of definitions which he return occasionally from worshipping exhibits, also to learn that none of the our false gods, and ask for instruction authorities are authoritative, for one of in the "law and the prophets," ask to the surprises that attend the dull be told what good architecture is, ask awakening of a layman's curiosity to to be referred to even some initiatory things architectural is to discover that standard of the fixed, the indubitable, the only definition of Architecture that the excellent in Architecture, some seems to have any acceptance among starting point as it were, like the Postthe professional learned is-Architect- Office in New York, from which we can ure. Tradition is the oracle of the art. measure distances, it is very unsatis-Now, a definition of this sort has ob- factory, to say the least, to be informed vious disadvantages for the uninitiated. that the only standard of Architecture is It has too many of the good qualities Architecture, that to make a beginning of a good fence. not be too high to be scaled by ficies at any rate, and that we who are the vagrant intelligence that seeks so used to carrying nineteen-twentieths the fruit of the tree of Knowledge of our better knowledge in the shape within. We, the Philistine Public, are of ready-made formulas and rules-ofrepeatedly denounced as enemies of thumb must in Architecture dispense Architecture, as a sore trial sent, it entirely with those aids and begin to exis hoped, for a beneficent purpose to the tract an elaborate architectural alphabet

UDGE from Mr. Barr spirit of the conscientious architect, Ferree's scholarly paper because we prefer architecture that after the manner of good stocks pays cult to make a good six per cent, because our predilections are for "strong" architecture like the ure as it is to make a Westerner's taste for drink, because we delight in piebald work, exclamatory decoration, shams and Queen Anne. The wall should we must study the entire art, in its superthe ancient Greek and the Gothic apex of the pyramid of Cheops—surely builders and others, and out of (for us) the crown of the greatest piece of mere purpose. Than to do this, it is so much there is a distance simply immeasurconsiderably less than the professional our visions do.

commission,

quite away from our midst by the force arts. of Authority. they bring into our dull lives suggestions and glimpses of the sunshine, the warmth, the joy and exuberance of an existence fuller than is ours. I purpose, therefore, to set down here some of such of these opinions as concern Architecture, and to beg Mr. Barr Ferree and others like him to do what they can to protect them for us.

In the first place we do believe that there is a difference really fundamental between what we call Building and what we call Architecture. We have come to think that Building, be it ever so scientific, or in harmony ever so complete with environment, purpose and so forth, still remains mere Building. For instance, an absolutely plain brick wall, perfectly constructed, admirably adapted to exclude trespassers and secure privacy does not contain the first

for ourselves out of the work done by element of Architecture. Between the recondite considerations about harmony Building in the world—and the rudest of construction with environment and finial in a Gothic pinnacle we consider easier to return to the old flesh-pots, able. From the one only the torrid and afterwards see to it that the next sunlight breaks, but from the other the architect whom we deal with pillors light of the inspiration that came to himself in his own work in return for some human heart mystically, as all

Besides this, we have come to ac-There are, however, certain opinions knowledge, and some few of us really to about Architecture which we lay- perceive, that among the Fine Arts there men* were gradually forming for is a close kinship—a consanguinity, if ourselves through the aid of that the word will pass. As a consequent, it instinct for better things with which is difficult for us to accept with full sateven the commonest nature is en- isfaction any definition of Architecture dowed, and because of the persist- that refers us solely to the mechanical, ence with which Art, like morality, in- technical, special or singular attributes sists upon recognition in life. We can- of the art. The real value of any one not thrust either from us. Complete art lies in the revelation which it holds exclusion means chaos, death. It is of something wider than itself, lies in simply impossible to live by bread the part which it has in the "large alone. Now I am sorry to see that lordship of the light;" and a definition many of these weak and falter- that tells us that Architecture is the art ing opinions are ruthlessly attacked by of building in conformity with purpose Mr. Barr Ferree, for I do not think it and environment, or anything of the will be as well for us if they be driven kind, is a denial of this unity among the Right or wrong, we feel that a Though they be but definition of Architecture to be quite gypsies from the great ideals of art, acceptable must recognize the kinship of that art with Sculpture, Painting, Poetry, Music, and if it should recognize technical attributes it must do so in a secondary and incidental way only.

When we look at a noble picture we may perceive not only the purely material elements of which it is composed such as the pigments, canvas, etc., and, if our powers of observation be sufficiently well trained, the technic skill of the artist, displayed it may be in truth of drawing, accuracy of perspective, delicacy or brilliancy of coloring, exactitude or finesse of detail, but also an immaterial element which endues the work with vitality and meaning for us and affects our feelings. In a picture gallery we may buzz and exclaim to the ineffable disgust of Mr. Ruskin before a piece of realistically-painted lace-work, but we certainly do not view it in quite the same spirit that we do a picture, such as, let us say, Millais' "Huguenots." Here we recognize the element of feeling

^{*} It may be said that laymen can have no opinions of any real value. Some persons will tell us that we should humbly listen to and accept what Authority teaches us. But where are we to find Authority? There are authorities; but they war with one another.



SOUTH KENSINGTON MUSEUM, (Selected Design.)

Aston Webb, Architect.

London, Eng.

in the work. The secret of the picture lies ture, Painting, Poetry and Music and has beyond what the eye sees, in what the precisely the same message for us. heart feels. As Mr. Hamerton said of Turner's Venetian pictures: "The ques- it will readily be seen how difficult it is tion is not whether they are close imita- for us to regard Architecture as tions of nature, but whether they have the art-power of conveying a profound impression." A photograph, even one highly colored, is not Art for us; not because of the absence of anything technical, but because it lacks the human element, the suffusion of feeling. Despite all that is said to the contrary, it is not fellowship with Nature that we seek in Art, but fellowship with Man. Parenthetically it may be worth while to point out here that these considerations, if they be correct, reveal the fatal deficiency of realism as it is commonly understood; for Art is more than faithful representation, it is revelation. The artist must be more than the showman; rather he must be like the chorus in Greek tragedy-a part of the play subtly heightening the action.

That immaterial But to return. element which we recognized in a noble painting as its peculiar artquality, the secret of its power of profoundly impressing us, we recognize quite as readily in the indubitably great works of Sculpture, Poetry, Music, Architecture. From all, the impression we receive is fundamentally identical. The feelings we receive from the choir of Beauvais, the stir of emotion pro-

duced by the inaudible

"Tones of minstrelsy Which linger yet about lone Gothic arches"

are the same that we receive from Poetry, from, for example, the following of Wordsworth's:

"But from the arms of silence-list! O list! The music bursteth into second life, The notes luxuriate, every stone is kissed By sound or ghost of sound, in mazy strife, Heart-thrilling strains that cast before the eye Of the devout, a veil of ecstacy

or from (to turn our attention to Music) the "Swan" song in "Lohengrin." The spell which each possesses is the same; each alike is an expression of the minstrelsy of the human heart. The soul of Art is feeling. Architecture has exactly the same source as Sculp- ordinarily supposed. Nay, more, the

Viewing the matter then in this light primarily construction in harmony with environment and purpose, or as good building, or as decoration, or as ornamentation, or as "the art of designing sculpture for a particular place." It may be any or all of these, so long as

it is Building with feeling in it. There! we have run into a definition, and, as Mrs. Poynter said, "when your head is in a bog your feet may as well follow," so let us accept that definition and do the best we can with it. Of course it is not necessary to say that the word feeling as used here is not co-extensive with the psychological province of feeling. Not all our intellectual, moral and religious sentiments can be expressed in Art. The particular concern of Art is the æsthetic feelings. Moreover the word "feeling" itself may be objected to as implicitly denying the intellectual element of Art. This element, however, is not necessarily excluded. There is no sharp division between knowing and feeling; they are the opposite ends of one line. terms are not antithetic or exclusive, but in a given mental state denote the predominance of a certain mental condition. Indeed, Wundt speaks of all the sentiments, Intellectual, Æsthetic, Religious, Moral, as Intellectual Feelings. No one who keenly appreciates Art or has striven himself for artistic expression will doubt for a moment that an exalted condition of the emotions is the prerequisite of Art. The centre of the inspiration with which Art begins is in feeling, not in cognition. Plato recognized this fact when he said: "But he who having no touch of the Muse's madness in his soul comes to the door and thinks that he will get into the temple by the help of art-he, I say, and his poetry are not admitted; the sane man is nowhere at all when he enters into rivalry with the madman." Indeed, the positive, purposeful, intellectual element in the most inspired works is probably less than is gift "inspiration," as commonly underpredominantly intellectual. had nothing like the intellectual appreciation of his most inspired sayings nor that a modern commentator has. Every great artist has builded better than he knew. He has worked, if one may say

so, unconsciously.

There is in contemporary architectural effort so little of the real art-impulse that not a few objections will only to feel the result in his bosom." probably be made to the predominant I take this to mean inferentially that position given in the foregoing to feeling. The architect has become so much a copyist, a dealer in secondhand material, that the sources of the true creative-impulse is dried up in Feeling! He scarcely knows what it is in the production of his work. His designs lack the quality of inevitableness, which is one of the characteristics of true art. Real feeling, truly expressed, demands the form of expression suitable for itself. The great artist allows the inspiration to suggest the form. The architect of to-day, however, apparently changes his styles as readily as the modiste does her "fashions." On not a few offices this legend would be appropriate-"Architecture in every style." It is not to be wondered at then if we find architects inclined to exalt the circumstances of "style," choice of material, concord of structure with purpose, and other matters concerning the form or method of expression into the first place as the essential element of their art. But the art-feeling—the source, the inspiration of art—should not be confounded with the art-expression. Take, for instance, the following verses of Shakespeare's:

There are two sources of pleasure stood, denies, precludes the pause and here for the sympathetic reader—(1) search which mark a mental operation the feeling of the poet revealed in the Goethe verses, and (2) the musical and perfect said of one of his works that it con-expression of that feeling. As a rule tained more than he himself knew, the reader rarely separates these ele-Socrates found the Athenian poets of ments in his appreciation. Technique, his day poor expositors of their own skill, the modes and forms of expreswritings, and no doubt Shakespeare sion are to the art-feeling but a vehicle, a means; and their excellences are of value to Art, not in themselves, but the insight into the meaning of them only in so far as they insure a perfect expression of the artist's feeling. Sir Joshua Reynolds says: "The great end of the art (painting) is to strike the imagination. The painter is, therefore, to make no ostentation of the means by which this is done; the spectator is our admiration of, say, fine coloring or accurate drawing in a picture is not admiration of art in the real sense, because fine coloring and accurate drawing are valuable to art, not for themselves, but because the artist can express his feelings more perfectly by their aid than without it. Similarly in Architecture, when we concern ourselves about the means, the vehicle of the architect's expression, we are stopping short of the real matter.

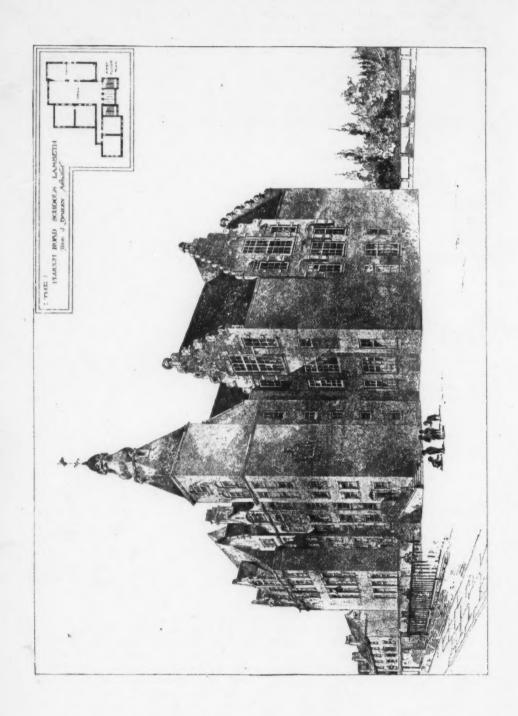
It may be urged, however, that in judging of the merit of a particular piece of architectural work we must consider not only whether it is an expression of feeling of a high order, but whether it is an expression of feeling in harmonious relation with the material used, the form adopted and the pur-True, but poses of the building. are these matters of relation matters of art? The design of the Parthenon would no doubt be very unsuitable for a modern office building; but if submitted by an architect for that purpose could we correctly say it is bad architecture absolutely? would be unsuitable, certainly. matter where it might be placed we who, to-day, have only at best a very dim appreciation of the purposes of the Parthenon would recognize that the building is an expression of art-feeling of the highest kind and in the highest degree. One of Chopin's Nocturnes played for a party to dance to

" Five hundred poor I have in yearly pay

Who twice a day their withered hands hold up Towards Heaven to pardon blood; and I have built

Two chantries, where the sad and solemn

Sing still for Richard's soul."



would be very unsuitable, but would and our defense is a tu quoque: our it be bad music, as music? A statue definition is not more defective than out of proportion to the niche in which other definitions. If we say Architectit is intended to stand would also be ure is the "art of ornamental and ornaunsuitable, but would it be poor sculp-Art exists out of relationship to considerations of utility, purpose, etc. But-and this is the necessity for the artist's considering these matters the feeling produced in us by a given art-production may be contradicted, as it were, by other mental states in which it is not in harmony, and this contradiction, at war with the satisfaction otherwise given, minimizes the pleasure we received. The incongruity which we would feel in viewing the Parthenon as an office building would lessen the sum total of the pleasure the structure would give us. Many writers perceiving the pleasure experienced in recognizing the harmony of a building with its purpose exalt this concord into an element of There is no finer concord between structure and purpose than we see in a steamship, but is the concord there fine art; and if it is not fine art there can it be such when exhibited in a building? From a work of art we may receive more pleasures than those which are purely æsthetical.

With these considerations in mind, then, it may be wise for us to modify and extend our definition of Architecture thus: Architecture is Building expressing æsthetic feeling. To produce the highest effect this feeling must harmonize with the form and the material in which it is expressed, and with the purposes to which these (form and material) are put.

But, the question may be asked: Even if we accept as a definition of Architecture, Building with feeling in it, how much more serviceable will it be to Building with feeling in it may be Architecture, but not necessarily good archi-

mented construction," or the art of building beautiful buildings, or anything of the kind, we leave quite as much unexplained and undefined as when we say Architecture is Building with feeling in it, or building expressive of feeling. There is, however, we believe, this difference: our definition emphasizes the indispensable element of Art. The definition we give takes a broader and a deeper view of the art than when we say it is "ornamented and ornamental construction," or "the designing of sculpture for a particular place and the placing it there." A deeper view, for behind the ornamental construction and the designing and placing of sculpture there must be feeling if the result is to be anything more valuable than a mechanical operation. A broader view, for our definition keeps Architecture in closer touch than the others do with the human element in it and makes Architecture a part of History in the best sense—the revelation of the spirit of mankind. The Classic spirit is revealed in Classic architecture—the architecture of reserve, repose,- and the Mediæval spirit in Mediæval architecture,- the architecture of exaltation and exuberance. In the former there is no fire. The inspiration is of the kind that tarries, that reveals itself logically, that consists primarily in the manifestation of a direction rather than an end. The invitation of Socrates to Phædrus, "Come, let us go to the Ilissus and sit down at some quiet spot," is the perpetual invitation of Greek art to mankind. How different from Mediæval art where the exaltation is so manifest, where the inspiration seems to you laymen than any other definition? have been a light breaking forth on a dark and solitary way. The Classic has become the architecture of gramtecture. Much poor poetry is pitably mar, the Mediæval the architecture of charged with feeling. It is quite as freedom, and so long as our architects important to know what kind of feeling are copyers, transcribers of "styles"must be present in Building to make of other people's feelings-whenever the it good and worthy Architecture, as it times become logical, formal, we may is to know that the presence of expect contemporary architecture to feeling is required to make it Architect- revert to the classical types; whenure at all. This is undoubtedly true, ever the times are restless, romantic, free, we may look for a rever- istic sentiment of the age is a contemsion towards mediæval types. In our plative melancholyown times we have seen proof of the accuracy of this statement. The "English Renaissance," so called, with the pre-Raphaelite movement, was a revolt for deeper feeling against the conventional, and in a sense a cry for greater freedom. It was attended, as we all know, by a revival of Mediæval architecture: it lingers with us to-day in the prevailing admiration for the picturesque in architecture.

And, finally, our definition reveals to us the real direction in which we in this country must look for good architecture. An improvement in our condition will not come from a turning to new copy-books, a following of new fads, but from a heightening and a refining of national feeling. As a people we are to-day too exclusively appreciative of mere vigor-too ready to accept extravagance, coarseness, size, show-the form which mere vigor is so prone to take. The public sentiment needs refinement, the subtle heightening of delicacy and charm.

There are strong reasons, however, why Architecture should flourish with us. In the Old World the character-

"Violent sorrow seems A modern ecstacy '

a mental condition better suited to expression in Music, Painting, Poetry, than in Architecture or in Sculpture which are adapted to voice a robuster feeling produced by a full physical existence and a rapid constant touch with the practical, concrete side of life. This robuster feeling is ours. But before it can produce fine art, reach a lofty expression, it needs, we fear, considerable chastening. However, in many directions and along many ways refining influences are at work. There is reason for much hope. While we cannot, indeed, . build a city as Amphion did Thebes, with music to the enchanted sense, the day may come when we shall set each stone in place to the music of high thoughts and noble purposes. All who are interested in Architecture should pray and work, particularly work, for the dawning of that day, so that those coming after may say of the humblest building in the land:

"They dreamed not of a perishable home Who thus could build.'

Harry W. Desmond.



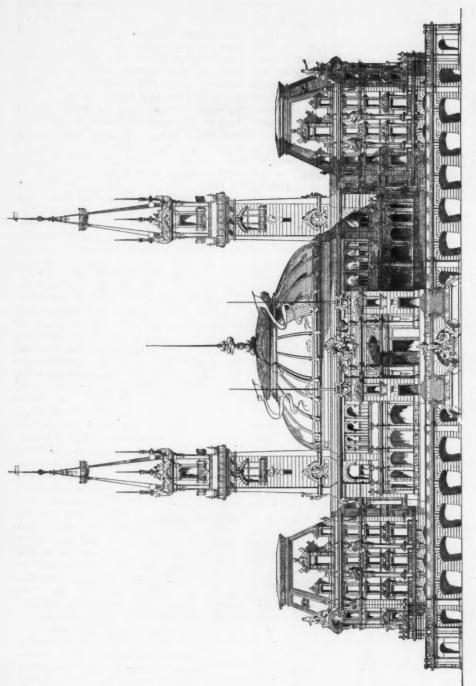


ART AND LIFE.



takes his head into his hands. If a He was doubtless very careless and man who does not pretend to be an very ignorant to confuse such an acid expert hazard a suggestion on, say, as the cost of production with such an political economy, hinting that the alkali as the price of labor; but then masters of that science have applied the economist was very blind and quite its presuppositions and principles some- inhuman to dress the major part of the nomena of life, he is forthwith pulled knee-breeches of his science. Having up sharp by some aggressive and gone thus far, we might take further astonished follower of Ricardo. "What heart and make bold to dogmatize a do you know about political economy?" he is scornfully asked, "Have you read the time-honored rule that the whole is

PECIALISTS have in- they have placed mistaken feet within herited such a large his fences?" Hence our sympathies, part of the kingdom if nothing else, would lead us to speak of current knowledge, out what could be said in favor of the that one, who would vanquished presumer. By seeking we act upon the supposi- might find that if he was measurably tion that their dominion is restricted, wrong, he was also measurably right. what too rigorously to the varied phe- Hercules of human nature with the stiff bit; we might apply to the occasion every book on the subject from Adam something more than a sum of its Smith down? Why, you are ignorant parts, and we might add that this enough palpably to confuse the cost of something more has a claim to repreproduction with the price of labor. An sentation greater, far greater than the edifying authority you are! Pray take claim of any of the component eleyourself off and speak whereof you ments. Do they not live only through We have frequently heard its embraces? We might say (this with language of this sort leveled at the a lower voice) that there is a definite slippery head of some venturesome place for men like Lord Brougham speculator; and perhaps it is very who, as it is said, wrote about one often justified by the poor man's cry- thing as a man who knew a great many ing ignorance of the specialist's primer, other things, that such a one may be But even so there is something more useful as a moderator of specialists, to be said. "Is it necessary," one just as each specialist is useful in his might ask, "for every specialist to be a own little department, and that, schoolmaster? Must he scold and although he must tread gingerly in the rate men as old as himself because ticklish and bewildering labyrinths of



DESIGN FOR THEATRE AND TONHALLE,

Chiodera & Tschuldy, Architects.

Zurich, Switzerland.

private property, he may strut boldly early or late these people might dimly on the broad common lands of the ask themselves what they would gain by

is neither artist nor learned in the very seldom that they put this quesarts, may yet have something to say tion to themselves consciously, and on art matters that is of possible value answer it with any sense of its importto layman like himself, that the present ance. The process is generally re-writer ventures a few remarks concern-versed. People seek for what art has ing the effect of art on life. These to give them in response to an inner remarks, it is scarcely necessary to demand; and it is only later when say, are not addressed to artists or they have learned to live somewhat connoisseurs. will tell them what the effects of art tion of its peculiar message is revealed are on life more vividly, more truthfully to them. and more completely than any words of anybody. But there are in this pose to imagine the case of a man, who country a great many intelligent and put these questions to himself—a man well-meaning men to whom art is who never wore clothes, but who so far nothing more than either a plaything might have worn them that his name is or a fad. Such people, indeed, form Smith. This man is obliged to occupy the bulk of society. They toil and toil; they build their houses; they rear their families; they make their associations; they find their places, hard or are paid when his bills are receipted, or soft as the place may be. In all these that he has nothing to his credit when necessary occupations, art helps them never a bit. A picture gallery becomes the place to waste an hour in; a book of poetry the admirable but incomprehensible and alien outgiving of a popular name. The more dogmatic and robust of them, seeing that the pursuit of art is frequently a fashionable exmore than money-makers. Either by his circumstances, partly by their

the pursuit of art and what they would It is on the supposition that one who lose by its neglect. It is doubtless Their own experience amid its splendor that a faint sugges-

But it will be sufficient for my pura good many hours every day in earning his living-in selling tin, perhaps; but he does not consider that his debts his debtors have settled up. Rather does he believe that a man is something more than a corporation, and that his immortality depends on something more than financial solvency. Circumstances, however, demand that he must always sell tin, and that the other good things in life cannot displace this occupation, cuse for delicate drones to make light but must be reconciled to it. Furtherof commanding responsibilities declare more, let me suppose that friend Smith roundly that it is nothing more than has eyes that can see, ears that can the refuge of the inefficient; but the hear, and something impalpable inside majority of those who do not come of his head. At the same time he is within its influence are too much the without one of those unfortunate lopcreatures of the hour not vaguely to sided dispositions that might severely grant to art a certain but utterly un- circumscribe his activities. His nature defined place in life. In passing they is eager, willing, adaptable, discerning, cast a glance at its treasures, raise wholesome; his inclinations are neither their hands in tribute, and then trot off the engineer of his actions, nor yet to the familiar round of ordinary occu- simply their motive power, but rather pations. We must have a very much more more the vehicle that will bear him advanced stage of civilization before the mass of these workers can share with any degree of intimacy that love of the ordered and living fairness of must make to the necessity of selling the world which at bottom is the life tin, he must come into most varied of art. But pending this problemati- and measured correspondence with all cal higher stage of civilization, there that is best in life-giving art, friends, are many money-makers by necessity good works each its proper place, dewho yet would wish to be something termined partly by his character, partly





Designed by Edison Electric Light Co.

claims. In order that this duty may mellow July sunset along the Serpenbe efficiently done, he will, among tine, watching the crowd of men and other questions, ask himself what is boys who bathe there. I recognized, the sphere of art-a question that he how impossible it would be to reproqueries as to its effects and message. beauty what I saw before me—the It is these queries that I now wish space, the atmosphere, the massive

would answer largely by a few further duce in its complexity of interest and piously to make attempt at answering.

"Friend Smith," I would say, "happy in a virgin nature, I can, perhaps, best meet your needs by bringing to your groups and above all the innumerable groups attention the effect which the pursuit of art has had upon one who has decreased; the atmosphere, the massive trees, the luminosity of the sky above, the sheeny, troubled surface of the atmosphere, the massive trees, the luminosity of the sky above, the sheeny, troubled surface of the atmosphere, the massive trees, the luminosity of the sky above, and above all the innumerable groups are trees, the luminosity of the sky above, the sheeny, troubled surface of the atmosphere, the massive trees, the luminosity of the sky above, and above all the innumerable groups are trees, the luminosity of the sky above, the sheeny, troubled surface of the atmosphere, the sheeny troubled surface of the atmosphere trees, the luminosity of the sky above, the sheeny troubled surface of the sheeny trou of art has had upon one who has de- at the same time, it was borne in upon voted his life thereto. 'It is the my mind that only through the service privilege of art,' says John Addington of art, through the labor of Greek Symonds, 'to quicken feeling and to sculptors and the service of modern lead our soul through all the labyrinths painters, was I at the proper point for of life as in a vision. Sculpture and discerning what this common scene painting, in particular, teach us to see contained of beauty and interest. No what is noteworthy in the form of man, painting could place in right relation and in the face of nature. Not many to the whole, and to the parts the mulweeks ago I walked in the light of a tiplicity of marvels it offered to my

what was revealed to me?'

an imposing building newly seen, or the diverse wonders of the world. some horrid clatter into which you are not very numerous, but such as brave enough to stick out, only bewith the commonplace.

that you are in danger of becoming acquired, and find the expression needed deaf and blind. Your life is crowded for its growth, you must, of course, displayed before you—the earth that is all the painting, sculpture, architecture, teeming with faces, forms, sounds, color, music and literature within your reach. through this manifold as if there was arts, what their relations are one to nothing to find until you came to the another, and what the advantages and final jumping off place, which, for limitations of the vehicle that each one aught you know, may be night. Now of them uses. You must at the same art, if it be properly learnt, will enrich time learn something of the historical and refine this poor coarse, sensuous development of art in general, and of life of yours.

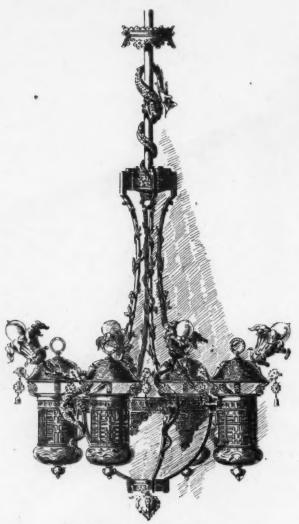
vision. No sculpture could fix and you will gain an eager, searching, seperpetuate the grace inseparable from lective, correct eyesight, and a hearing the movement in those men and lads. that will be sensitive to the elusive But except for years of training under concordance of sound. For the whole this influence, should I have had the world will become expressive and sugeyes to see and the spirit to admire gestive, instead of being merely arid and blank. Sensations will begin to "What art has done for the student, have meaning. They will not glance it can in a measure do for all of us off as a bullet does on a hard and slant--'it can lead our soul through the ing surface, but will find a place in labyrinth of life as in a vision.' How your sensorium, each of them being do you spend your time, friend Smith? filled with a thousand little attractions Recollect for a minute all that you and repulsions. It will rest with you see and hear in the round of an aver- to discover what these attractions and age day, the inevitable sensuous ac- repulsions are-to sort the sensations, companiments of rising, dressing, eat- discarding for the sake of economy ing, business, going up and down town, much that you would like to keep, and social diversions, and a trip to the giving each a proper, although it may country. It all seems very monoton- be by no means a permanent compartous, does it not? One day is very ment. For the life of art must be a life much like most other days; every- of constant growth, and as years go on, thing is a confused blurr. Perhaps and the taste changes, things will seem here and there, now and then, some somewhat different. But the end will domineering impression will stand out remain always the same-to offer a -a pretty face, an odd suit of clothes, warm and appreciative hospitality to

"Thus art, friend Smith, should make have been accidentally thrown; they you not simply a virtuoso, but a detective medium-eliciting from the manithey are they constitute the sensuous fold of life what aspects of beauty, events of the day. If you are pressed color, music and distinction things confor conversation, you might talk about tain. For all of us art has but one them in the evening; but more fre- permanent abiding place-in our own quently their effect is too ephemeral minds. That we find it in a picturefor any verbal tribute. They are buried gallery, in a concert-hall, or on the in a hazy mass of sensation, and are pages of a book are but accidents. They are the kind of accidents which cause of some adventitious circum- society should make inevitable in the stance. Instead of traveling through lives of its units; but taken alone they life as in a vision, you make the jour- are meaningless. It is the inner and ney along a stupid canal that is lined pervading presence of the spirit of art, the love of living beauty, that is neces-"The point of all this is, friend Smith, sary. In order that this spirit may be with sensation; the whole earth is make a careful and intelligent study of life, motion, contrast, discord and har- You must learn how far adequate is the You are groping your way revelation afforded by each one of these Under its influence each of the separate arts—the many



EXTERIOR STAIRCASE AT VITERBO, ITALY.

Vol. I.-2.-21.



Designed by Edison Electric Light Co.

already mentioned.

forms and the varying importance they must be hospitality of sense; so unhave assumed in different nations at derlying all interpretation of art there different times. And you must bring must be justice of sense. After you this schooling and knowledge to bear in have begun to see, friend Smith, you estimating the worth of current art must make sure that you are seeing products-wherein consists their pe- clearly and straight. Danger exists culiar flavor, and what elements of per- in the over-education of any one of the manence and transience they contain, faculties. No man can afford to sur-Concurrent with your ability to ac- render himself too completely to a quire, and to use this knowledge, will stream of impressions. The detective proceed the education of your sensorium medium must be sensitive; but it must also be active. It must receive; it "And here it is time to make a dis- must reject; it must modify; it must tinction. I have already indicated combine. The twinkling impression that underlying all love of art there must first of all be seized-but only to

show cause why it should not be sum- make the communion; but it is only marily dropped into the catalogue of thus that men speak to one another the misplaced. If it passes successfully with complete truth. All other means through this test, the work of appre- of communication are faulty. ciation and comparison begins. If it can speak to sense only through perbe a human face, we look to the ex- sonal contact, and the message conpression of the whole; the excellence veyed is brutish; feeling can speak to of each of the features, the extent to feeling through symbols, but the meswhich they are friends or enemies, the sage always intends to become either way in which the lip curls, the eye maudlin or vacuous; reason can speak flashes or the nose predominates. If to reason through symbols, but the it be a building we seek the conditions message lacks warmth, vitality and under which the architect labored, the power; spirit, which is all of these opportunities which were offered to things and something more, can speak him, the idea which he sought to express, the degree of skill, consistency and taste with which the idea has been clearly defined and yet infinitely sugdeveloped, and the amount of originality and vitality the conception and our feelings, satisfy our reason, conthe composition betrays. The phrase 'justice of sense' covers the whole of this process. It is not a matter of mere perception, because perception will also ennoble and dignify your life. always tends to be passive; it is not a is the great Idols of the Cave and the advocate to confuse; and no preposin the whole.

unity of spirit; and when this unity is activities. cate communion on earth is established. may have a high and temperate soul," The slightest loss of balance, or super- "Tis human fortune's happiest height to be abundance of part mars and may un-

to spirit through symbols; and these symbols will convey a meaning that is gestive—a message that will stimulate vince and occupy our nature. In this way, friend Smith, art will not only enrich, refine and clarify your life; it

"All that I have said, friend Smith, matter of intellect alone, because a comes to this. Art is an indispensable multitude of impressions empower the element in the matured and perfect free play of the mind; it is the union life; but in the words of a recent of the two in one composite act. writer, it must not be made a fetich; it What this justice of sense has to fear must be kept simply as a contribution. Like all things that are possessed of a Market Place. It should allow no unique and captivating nature, some men make too much of it; and thereby session to bias. The true lover of art lose not only the best of life, which is can wear no livery; but, taking the a clean, organic wholeness, but the best advice of Goethe, must live resolutely of art as well. If you mistake it to be the patented possession of a cultured "Open your senses, friend Smith; dis- few, who thereby are alienated from cipline and broaden your intellect; the herd, it will make you exacting, quicken, chasten and subdue your finical, and even querulous. It will feeling. There is an element in art, in interpose a barrier between you and nature and in life that cannot be de- the seamy and sordid side of men and tected by the senses alone, although things. No man is too good for life; the senses are necessary; that cannot no man is above rational and proper be discerned by the mind alone, activity. If art is not made a distractalthough the mind is indispensable; ing, disabling, and at bottom a disfeeling, emotion enters into the inter- heartening thing, it should by sweetenpretation, but does not make it. That ing, enlightening, and to a certain extent this element may be elicited all the even steadying our natures, make us faculties of a man must meet in the the more adequate to those necessary Therefore, I say, friend attained, the surest, yet the most deli- Smith, bring art into your life, that you

A spirit, melodious, lucid, poised and whole."



LOBE. - AMIENS CATHEDRAL.

SKELETON CONSTRUCTION.

THE NEW METHOD OF CONSTRUCTING HIGH BUILDINGS.



ton construction, and consists in the use walls. thick brick walls. or rolled steel girders spanning the discolumns are encased with brick-work, and when the building is plastered and finished on the inside there is no visable evidence of novelty.

The advantage of using the com-

THIN the past three the bottom to the top. The lower story or four years a new of a building is the most valuable for method of construct- rental, yet it is in this story, of all the ing very high build- stories above the sidewalk, that the ings in New York has greatest area of a valuable lot must, come into vogue. It under the old method, be wholly is known as the skele- surrendered to enormously thick brick Every inch gained in the of iron or steel columns, with thin cur- width or length of the inside measuretain walls between, in place of solid ments of a costly building increases the The curtain walls availability of the structure, and therethemselves are carried on wrought iron fore swells the income derived therefrom by the owner; but when this gain tance between the columns, which is of space is feet instead of inches, in usually about 15 feet. In addition, the width and length as well, the reasons weight of floors is also transmitted to become obvious why the new method the columns, so that the latter support of construction, which takes up less the entire building and contents. The than one-half of the area of plain brick walls, should immediately spring into public favor after an example or two had proved its strength, safety and probable durability. The great value of favorably located lots, fairly forces posite construction is the room space owners to build skywards in order to gained in the difference between a get an adequate return on their invest-thick wall and a thin one. In the or- ment. The London and Lancashire dinary method of building, the higher Insurance Company not long ago a brick wall the thicker it must be in erected an office building on a lot its lower parts. The New York build- which the company purchased on ing law very properly requires a wall Pine street, New York City, immediately to be built on the principle of a mast adjoining the U.S. Sub-Treasury propof a ship, the off-sets at various stories erty. The lot measures 24.2 front by in the thickness of a wall in heights 74.4 deep, and the price paid for the securing what is in effect a taper from same was \$195,000. The lot is one foot

wider on the rear than it is on the front, ings came a safer construction. Eight and one side is one inch deeper than the or ten stories in height—the height other side, so that the actual area of always being considered as above the the lot is about 1,834 feet, and makes sidewalk, and not including the stories the price figure about \$106 per super- below that level nor including towers ficial foot. The old building was torn nor stories above the level of the main down, and a new building erected of roof—seemed to be the limit for a long the skeleton construction. The cur- time that owners could see their inin the first story as in the tenth story. it is a matter of general knowledge that ters of the unit of a city lot.

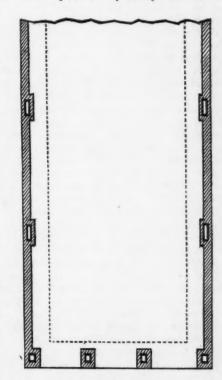
the year 1870. Let any person who twenty-eight stories in height, on their has long been a resident of New York little corner which only measures 57 draw on his memory and he will find by 72 feet. that all high buildings which in the popular and received interpretation of relative space occupied by the walls in that term are now so styled, are of a date subsequent to the erection of the Prior to that Post Office building. date there was a very limited number of fire-proof buildings within the limits of the United States. Those which did exist were chiefly Government buildings. Only ten years before that the first "I" beams were rolled in this country. Peter Cooper's Trenton, N. J. Mills, and the Phœnix Iron Co., of Pennsylvania, began to manufacture them about the same time. In the early fire-proof buildings—the Cooper Union, Harper's publishing building and the New York Historical Library building —the iron floor beams are of a shape

commonly known as deck beams, with brick arches between. It was seen that if buildings were to be built higher than the conventional five or six story limit, to a height beyond the ability of firemen to successfully cope with a fire, such buildings must be constructed with something better for the floors, partitions, stairs and roofs than a mass of wooden beams, studs, plank, furring and lathing, and more scientific- the new system and the old, the dotted

very similar to what are

tain walls between the vertical columns terest in going to. Suddenly a very are 12 inches thick, the same thickness much higher jump has been made, and Lots on Wall street and lower Broad- Mr. Astor's new hotel, now erecting way are of greater proportionate value at 59th street and 5th avenue, will be than that of the Lancashire Company, seventeen stories in height. It is quite which has an area of only three-quar- as generally known that the proprietors of the Sun are talking of The era of high buildings began with putting up a new building, to be some

The accompanying plan shows the



ally arranged than a pile of kindling lines representing the portion of the wood for burning, each piece being area of a lot that solid brick walls separated and exposed to the air, would occupy. High buildings are With the incoming of high build-demanded, and to-day there is simply ively American:

1. The modern passage elevator.

2. The flat-arch system for fire-proof floors; and

form so important elements to a comto them will be necessary.

not used to any great extent for passenger service. Many persons will a sleeve in the centre of the car; very slow in movement, but safe, although frequently getting out of order. This was one of the first passenger elevators in this city. Improvements rapidly followed, until now great speed with absoof a high building. The elevator serstair-case, up flight after flight, towards the clouds until he finally reached his destination in an exhausted condition, when he feebly opened the door and inquired, Is Saint Peter in?

It was in the Post-office building in this city that for the first time in this or any other country was introduced ing his tour in the United States. floor beams. of Mr. Kreischer, a well-known manu- were many vast building schemes in facturer of fire-brick. His was not the hand. . . .

no limit to the height that a building invention of a flat arch in itself, but of can be safely erected. This result a flat arch, whose end sections abut has been reached mainly through three against rolled iron floor beams, and inventions, all of which are distinct- recess around the bottom flanges of the beams, having on top wooden sleepers and wooden flooring, thus forming a level ceiling underneath and a walking surface above. Previous to 3. The skeleton construction. Mr. Kreischer's invention the method of filling in between iron beams was by Mr. Kreischer's invention the method of lately joined the combination in which means of common brick arches, leveled the first two were so long inseperable, up on top with concrete, and floored but it has come to stay, and the three over. On the underside the bottom work in unity for a common purpose. surfaces of the beams were left exposed It is with the third invention that this and painted. A ceiling of a room article has to deal, but the other two then consisted of a series of curved arches between iron beams, which were prehensive understanding of the useful- very unpleasant in their appearance ness of the third, that a brief reference and effect on the eye. If a level ceiling was determined upon, it had to be Up to the year 1870 the elevator was obtained by wooden or iron furrings and lathing, fastened up to the underside of the beams and then plastered. recollect the old elevator in the Fifth The flat-arch system provided a level Avenue Hotel, with its vertical iron ceiling at once, at a less cost and with screw extending the whole height of much less weight of material than before. the elevator well, and passing through The iron beams were covered in and protected from fire, and the side walls had a lighter load to carry. impulse was given to fire-proof construction, and following the great fires in Chicago and Boston, the Kreischer system came into general use all over lute safety has been attained. It was the country. In a legal contest that the elevator that taught men to build lasted for a number of years, it was higher and higher, for without the ele-finally decided in the U.S. Circuit vator a high building is impracticable. Court 'that the Kreischer patent was A story that long ago went the rounds void for want of originality under the emphasizes this fact. A gentleman had crucial test of publications from all occasion to make a call upon an archi- parts of the globe, that a patent must tect whose office was on the top story sustain when the law is invoked in its behalf. The decision of Judge Wallace vice was temporarily stopped on account prevented the inventor from realizing of repairs being made to the steam the profits of his invention. It did boiler, and the caller ascended by the more, it deprived the inventor of the honor of having made the invention which abroad is recognized as an American system of fire-proof floorings.

At a meeting of the Royal Institute of British Architects, held in December, 1882, Mr. A. J. Gale described various things which he had seen durhollow-tile flat arches between iron Among other things he stated that "In This was the invention New York at the time of his visit there The floors were mostly

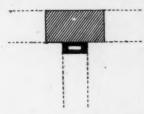
of fire-proof construction, consisting of system in the light of earlier publicairon beams filled in between with hol- tions made in France and other counlow tile flat arches, the iron being pro- tries. It is true of the skeleton contected above and below, and joists struction. being laid on the top surface." In connection with this statement, Mr. John cast iron front buried in a brick wall, Slater said: "It seemed to him that its immediate predecessor can be seen America was the country, par excel- in the devise frequently used to provide lence, where suggestions were to be sufficient bearing strength in brick picked up by architects. To put the piers of too small an area to safely bear matter colloquially, it was the great the load to be imposed without re-en-place for 'tips,' and there could be no forcement. A brick pier, of a size not better place for an architect to visit than larger than required for the safe supthe States, after studying on the continent of Europe the artistic and archæ- haps also required to carry the end of ological sides of his profession. The a line of girders supporting floor beams. Americans were, in fact, so ingenious An iron column is therefore placed imthat their ingenuity was catching, and it appeared to be impossible for any one to visit the States without deriving much instruction. would be taught the wholesome lesson that everything English was not necessarily the best. It was only in regard to what might be called the constructional part of an architect's profession that he made these remarks." Chairman, Mr. Ewan Christian, said that "having had the advantage of traveling in America, though only for a short time, he was very much impressed by the go-aheadedness of Americans. If a man in the States brought out a good invention connected with building or anything else, it was straightway adopted all over the country until something better was produced, when that, in its turn was taken up.

The skeleton construction will entitle Americans to as much future praise as have ever been so generously given them for past improvements made in

the art of building.

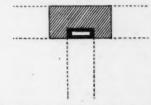
The whole history of science is one continuous illustration of the slow progress by which the human mind makes its advance in discov-It is hardly perceptible, so little has been made by any one step in advance of the former state of things, because generally it will be found that just before there was something very nearly the same thing discovered or invented. This is true of the modern Elevator in its steps forward from the

Without likening the skeleton to a port of the brick work above, is per-

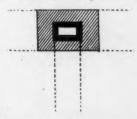


mediately adjoining the back of the

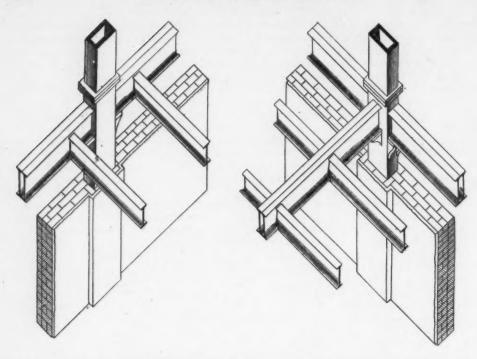
If the projection of the column be undesirable, then the column is embedded within the back line of the pier.



In the case of a flank wall on a street front, where the window openings are numerous and the brick piers too small to carry the weight of wall above and floor loads in addition, the piers have been



hoisting apparatus of the ancients. It stiffened and strengthened or relieved is true of the American flat-arch floor of load by iron columns entirely con-



also concealed above the columns.

Such examples have been used repeatedly for many years, and contain all the essential features of the skele-The first complete ton construction. cast-iron front ever erected in the world was put up in New York in 1848, yet that was but a repetition of iron columns and lintels long previously used as a substitute for stone and brick to the extent of a single story. So the skeleton is simply the evolution or expansion of the principal so long used in a smaller way. No patent stands in the way of the free use of the skeleton construction. A patent was issued in 1869 to a manufacturer of architectural iron work in New York, which public property.

cealed within the piers, and iron lintels the columns start from the base course of the foundations; in other cases from the top of the foundation wall, or the top of the basement story. There is still another method, such as was used in the World building, but which is not, strictly speaking, the skeleton construction, as the columns are not embedded in the walls but stand clear from the same; the walls are of solid brick and of great thickness, although supporting nothing but their own weight, which indeed is enormous on account of their great height. floors are carried independently of the walls, and in this respect embodies the same principle as the skeleton construction.

One or the other of two methods is covered the skeleton construction, but generally used in the skeleton conthat patent expired by limitation five struction. In one the girders are years ago, and the invention is now placed between the columns at each story and carry both the curtain walls There are several variations in the and the ends of the floor beams. In use of iron skeletons. In some cases the other the girders carry the curtain the frame is carried up to within three walls only, and are placed at every or four stories of the roof, and a solid second or third story; the floor beams brick wall used for the balance of the are supported by girders placed at height, carried by the skeleton at the right angles to the columns. In the top line of the latter. In some cases foregoing cuts the two arrangements

are so clearly shown that further de- tained in the revision of the building

intended to convey.

walls are usually built with hollow bricks, of the dimensions of common brick, so as to allow of the plastering being done directly on the wall, and thus obviates the necessity for the use of furring to prevent dampness from striking through.

At the foot of each of the vertical lines of columns it is the general practice to use a cast-iron flanged base to



greater area of bearing surface.

wrought iron beams are frequently used; and when placed below the water line they should be thoroughly coated of brick or stone work, through which

with coal tar applied hot.

isting building law makes no special pro- honeycombs and eats entirely through vision. At the time when the law was the metal. Mild steel, such as beams enacted, in 1887, the use of composite are rolled of, rusts faster than wrought structures was not foreseen. under that law, walls may be con- the contrary, slowly oxides in damp structed of stone, brick, iron or other situations; rust does not scale from it, hard incombustible material, and by and the oxidation when formed is of a implication a combination of any of much less dangerous kind, extending cases to which the law does not di- and then stops for good. There are ance with one of the amendments con- affected by such mishaps, cast iron

The small law which failed to pass the last Legisscription is unnecessary. The small law which failed to pass the last Legisdetails of bolting, etc., have been ture of this State. The columns are omitted, as these would add nothing to required to have a casing of brick work the information that the drawings are not less than four inches in thickness which must be bonded into the brick The inside four inches of the curtain work of the curtain walls. The exposed side of the girders are required to be similarly covered in. The thickness of a wall is determined by its height, but where walls are carried upon girders, the heights are measured from the top of such girders, except that no curtain wall is permitted less than 12 inches in thickness. metal work is required to be painted before being set up in position.

In the greater number of skeleton buildings erected in New York the columns are of cast iron; in the smaller number rolled steel or wrought iron of various forms of section. Some constructors advocate the use of cast iron' only as the material for the columns which are used in the walls. High buildings are erected for permanency, to last for centuries. When columns are built around with brick work they are buried out of sight for all time, so to speak. The oxide of iron paint, so commonly used for coating iron and distribute the imposed load over a steel work is largely mixed with fish oil instead of linseed oil, and soon dries Crib footings of rolled steel or out leaving a coating of dry, broken scale or powder. Between the columns and the outer air is only a few inches dampness or rain finds its way. In For the skeleton construction the ex- wrought iron rust is insidious, and it True, iron at first, then slower. Cast iron, on these materials, but the skeleton has only a little way into that metal, to been ruled to be one of the kind of about the thickness of a knife-blade, rectly apply, and is therefore subject other dangers to be apprehended, such to the decision of the Board of Ex- as gases and creosote from flues, escapaminers whose permission must be ob- ing steam from defective pipes, leaks tained before such a structure can be or an overflow of water, all quite posproceeded with. The Board regulates sible and probable to reach the colits action in skeleton cases in accord- umns. Wrought iron is seriously come into use so recently that time has and steel for certain purposes. the trouble is local for any one girder one story and the bay or portion of the brick wall which reaches up to the next iron or rolled steel is matchless. first instance to avoid possible bad results. For wrought iron and steel colallowed to cover partial deterioration should such columns have an unsupameter.

has almost entirely superseded cast iron, out wrought iron. promptness with which rolled beams non-conducting material. metal asunder; all this has contributed steel for tension. The least thickness

practically not at all. Mild steel has to the extended use of wrought iron not yet enabled men to speak positively for durability and lasting qualities how short or how long it can retain its under any and all circumstances of integrity in adverse situations. Damp time and elements, particularly when plaster and cement corrode wrought buried out of sight in a casing not iron and steel; lime is a preservative, sufficiently thick to prevent dampness If from any cause a column is affected or wet or change of temperature from in one place the entire structure above reaching the metal, as in the case of it is affected, but if a girder is affected wall columns and beams for the support of the curtain walls, cast iron is only carries a portion of the floor of the best material to use. For floor beams and for interior girders, wrought

girder above. While failure in a gir-der would be far less disastrous than members of the Board of Examiners failure in a column, any trouble would when the first plans of the skeleton be serious enough and fully warrants structures were presented for their apevery precaution being taken in the proval, that the greater expansion of one material than of another, might work some trouble. The same bugbear umns a margin in material should be had to be overcome when cast iron fronts were first introduced, when prefrom rust. Instead of a low factor of dictions of failure were based on the safety, as 3 to 1, when weight is to be expansion and contraction of the metal. sustained by material that is to remain Events proved that the temperature of unimpaired, the factor should be as our climate, from the greatest cold to high as 5, to provide for the loss the greatest heat, exerts upon cast iron of a portion of the sectional area no appreciable effect, and for use in of such columns by rust, so that buildings is practically without expanthe remainder of the metal may sibility. Cast iron, if of goodly thickbe sufficient to safely carry the load ness, offers a far better resistance to calculated to be imposed. No part of fire, or fire and water combined than the metal in a wrought iron or rolled wrought iron or steel. How well even steel column should be less than three- thin plates of good cast iron will eighths of an inch in thickness, nor bear heat is shown in a familiar way by a common cook stove. Thin sheets of ported length of more than thirty times wrought iron will shrivel up almost like their least lateral dimension or di-paper when brought in contact with flames. A comparatively moderate For beams and girders wrought iron amount of heat will elongate and twist wrought iron and steel out of shape. and latterly rolled steel has crowded When used for girders and floor beams The facility and they should be entirely encased in some Whether can now be obtained; their admirable columns of these materials should be and scientific shape by which the great- encased is an open question. The adest strength is obtained with the least vantage in one direction of a casing weight of metal; the concise and simple for wrought iron or rolled steel coltables of the bearing strength for the umns as a protection against fire, is a respective sizes and various lengths of disadvantage in another direction, in beams freely circulated by the manu- that it may allow rusting to go on unfacturers; their reasonable prices; and seen to a dangerous extent. Covered the preference of architects and engi- or without covering, cast iron is the neers to use wrought iron or steel when superior metal for columns. Cast iron the load tends to separate or tear the is best for compression, rolled iron or

for a cast iron column should be three- fourth of the whole wall, and lime morquarters of an inch, and the greatest tar is no more proof against severe heat unsupported length for such column than is limestone. Consequently the should not exceed twenty times its bond, by burning out, allows the wall average diameter. Usually the box to fall, making the damage as complete form of cast iron column is employed, as though the bricks had been devoured but in many respects the H-shape by the flames. The manner in which is the best for use in skeleton bricks are hurriedly and carelessly laid construction. In allowance for poor quality of cast with mortar as they should be, but with iron, and for unseen defects in the one inner side of each brick having castings, the factor of safety for cast little or no mortar at all against it, iron columns should be 6 to 1, the same as the present building law provides for all posts, columns and other ver- chambers is expanded during a fire. If tical supports of every kind of mate-

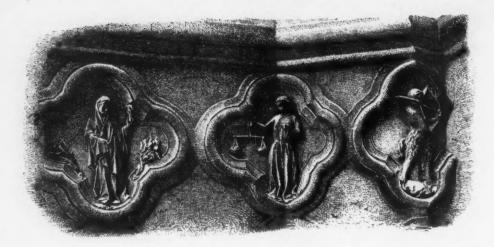
When cast iron is used architects throw and destruction of a brick wall. should insist on having the very best Pennsylvania iron districts of iron run directly from the blast furnace, thus which makes iron hard, and phosphornot only a purifying process, but it is punity. an annealing process as well. By melt-This is the practice in all the architectural iron foundaries in New York.

The brick work which surrounds the skeleton cannot entirely be depended upon as a protection for the metal against the effects of fire. The cover-The mortar joints compose nearly one-

order to make up in a wall, not slushed in on all sides leaves countless air spaces within the wall, and the air within these confined heated air will run an engine, its expansive force can surely aid in the over-

The skeleton construction imposes no kind. Many columns are made in the new conditions on the architect. It calls for no skillful treatment to make it appear what it is. The metal frame, saving the expense of re-melting pig like the bones in a human body, is coniron in a foundry cupola. Such columns cealed from sight. Indeed, the archiare almost as brittle as glass, and when tect is relieved from many troublesome so made should be prohibited by law conditions. He may design his strucfrom being used in a building. Pig ture without regard to width of piers, iron, when melted in a cupola, changes so that a front of brick or stone may be its nature and becomes a different grade made nearly as light and airy in appearof iron, getting rid of a certain amount ance as one of cast iron, and with as of impurities, such as combined carbon, large window openings as desired. The building is so tied together laterous, which is one of the elements of ally and vertically as to resist wind weakness in iron. The re-melting is pressure or any other strain with im-

Already the architectural appearance ing different brands of pig iron together of New York is being altered by the the mixture is given desired qualities skeleton structures. New opportuniwhich they do not possess separately, ties are opening up for architects to display their skill in treating problems of height, such as their professional brethren of a few decades ago never dreamed. It remains to be seen whether the æsthetic spirit will keep pace with the mechanical progress in ing is thin, and at best brick work is not the art of building, and bring forth defire-proof. That bricks resist far better signs of grace and beauty for the towerthan anything else is beyond question, like structures, notwithstanding any but a brick wall is quite another thing. pre-conceived notions of disproportion between height and width.



BYZANTINE ARCHITECTURE -PART II.

(CONTINUED.)



had before dared to use it on a grand tell you what I think of it hereafter. scale. We say wrought-iron girders tury, though they were used in the third century at Caracalla's Baths. Heavy abutments had to be provided curious flat apses with which Byzantine architecture abound were made to that end, though flat apses had been used were required to be large and heavy invent new ornament for them. to support immense superstructures, ornament had to be used.

E see that the Byzan- itecture; the latter went so far as to tine architects and say publicly that the interior of Sta. sculptors were full Sophia was, in his opinion, the most of resources, both beautiful in the world; and Professor constructional and Lewis, in his preface to Procopius' artistic: the dome Buildings of Justinian, says: "Earth-"pendent by subtile quakes and faults of construction occamagic" on its four sioned the rebuilding of the great dome, pendentives was a prime invention; I but it still crowns, after a trial of more say invention, because, though it may than 1,300 years, one of the most beauhave been known for centuries, no one tiful buildings in existence." I shall

There is no recipe for invention, it is are an invention of the nineteenth cen- a gift; but when the elements of architecture have been learnt, there seems to me no better exercise as a preliminary to invention than studying how forto resist the thrust of pendentives, mer architects adapted old forms to domes, and semi-domes. Many of the new wants, how they solved the new problems of construction that were forced upon them, and how they artistically treated those new forms, so as very much earlier. All sorts of ingen- to bring them within the pale of archiious devices were used to save center- tecture; nor a better study for sculping and its shoring, as I shall show tors than how to adapt the old ornayou, and when the capitals of columns ment to the new forms, until they can

Greek architecture was purely an new forms and new adaptations of artistic invention-the constructive principle was that of Egypt and Stone-Mr. Ruskin and Mr. W. Morris have henge. The Romans seem at first to both been eloquent on Byzantine Arch- have copied, as well as they could, the

lintel. As soon as vaulting came into general use the thrusts had to be counteracted, for even supposing that the vaults when set had no thrust, this was not the case when they were green.

You can see how the halls or compartments, in large vaulted buildings such as the baths, were arranged, so as to act as counterpoises to one another. When groined vaults were adopted, projecting piers were brought out at arches sprang from them next the walls, groined vaults were used in an apartpart of the wall was abutted by deep walls and by vaulted recesses, but above baths and the nave of the basilica of Maxentius. In the West, before the inclosing them in solid half-squares, the angles of which acted as buttresses.

The walls of circular-domed structures were either of enormous thickness, or else the structures were made square outside to get abutments at the angles. We see no signs of any great organic advance in construction, after the income to the Baths of Constantine, rubble terraces that acted as roofs. where the groined vaults of the buildabutted by shallow apses without solid

debased Greek architecture of their day, groins of the vault. I say help, because to have introduced such alterations as the entablatures then became lintels. would make every part conform to a When the architect of Caracalla's Baths general rule, and to alter the æsthetic wanted to make his celebrated solar part so as to make it more in accord-cell, i. e., a covered swimming bath lit ance with their coarse taste and love from above, he could not vault it, or of magnificence. After a time the arch he would have blocked out the light was found to be too convenient to be from the tepidarium, so he hit upon the disregarded, and gradually superseded original scheme of carrying the flat roof its older and more dignified rival, the and ceiling by means of wrought-iron girders, forestalling the modern English invention by some 1,600 years.

It is possible that at some future time, churches and cathedrals may be wanted whose plans and arrangements are adapted to the Protestant ritual. In the Byzantine churches we have every sort of plan that can well be imagined, circular, octagonal, square, trefoil, quarterfoil, cruciform, of many varieties, and of that form which the the angles of each chamber and plain Byzantines called "in the shape of a circus," but which we call "in the so as to provide abutments for the form of a basilica," and these Byzandiagonal thrusts of the groins; where tine churches might give hints for what is wanted for a true Protestant church ment higher than the rest, the lower or cathedral. Two-storied museums, picture and sculpture galleries may some day be wanted to show the works these, where the outer walls were com- exhibited in their lower rooms instead paratively thin, buttresses were used, of concealing them, and many Byzanas in the case of the tepidaria of all the tine devices might give us hints how to do this.

The Byzantine churches were conemergence of the Byzantine style, the structed of all sorts of materials. The half-domes of apses were abutted by walls mostly of stone, with a course of bricks between each stone, and the vaults and domes of burnt brick, and roofed in all sorts of ways from the common truss of perishable and inflammable wood to the permanent vault or dome. In Syria another form of roofing was used, i. e., vast slabs of stone were supported on arches and vention of groined vaults, until we formed the ceiling, and supported the

If we owed that Bulgarian peasant, ing in front of the Laconicum are Oupravda-afterwards called Justinian —a debt of gratitude for nothing else, angles. We know, too, that as these we owe it to him for having Sta. Sophia great tepidaria of the baths wanted built without wood, as well as for the lofty arches to the recesses both for excellent construction of the fortificaeffect and light, the entablatures be- tions of the Castle of Edessa on the tween the columns were consequently Euphrates, which have lasted to the dispensed with, and the columns were present day. We, who are Londoners merely shores with a strip of entabla- living in a brick district, naturally take ture above them to help support the the greatest interest in vaults and

domes of brick, as we have the mate- may be remnants left of our former rials at hand without the expense of car- greatness. riage from a distance, besides being more familiar with brick construction, vocate for the architectural use of iron, flavor of the locality. less countries. The old proverb says, " Necessity is the mother of invention," had, some other means of covering had use. to be devised.

Mesopotamia contrived to cover their buildings with vaults and domes almost without centering, from having no other means of roofing. Strabo (Lib. 16, c. shaped pillars. structed of baked brick and asphalt," the palm,"

great buildings to the state of walls, them for want of funds. for most of the great vaulted construc-

You all know that I am a great adnot to speak of brickwork having a but under the destructive influence of Vaults and fire iron is even more ruinons to strucdomes naturally took their rise in tree- tures than wood itself, and stone and marble calcine, or split to pieces.

The value of the past is in the priceand were good timber was not to be less lessons it can give us for present The study of Virgil gave the world the Divina Commedia of Dante, We see how the people of Persia and and the study of the written masterpieces of antiquity the present literature of Europe; the study of the fragments of antique sculpture revived the sculptors' art, and gave dignity to painting. 1, p. 5), speaking of Babylon, says: Even in the present day, the discovery "Whence among the seven wonders of of the ruins of an ancient civilization the world are reckoned this wall and may be fraught with wonderful and the hanging gardens. . . . the garden unhoped-for results. Look at M. Dieuconsists of vaulted terraces, raised one lafoy's discovery of the ruins of the above another, and resting upon cube- Persian palaces! The magnificent The pillars, enamelled friezes from the Palaces of the vaults and the terraces are con- Darius and Xerxes, that were found at Susa, have not only enlarged the minds and, in speaking of the city, he says: of every visitor to the Louvre, have "All the houses are vaulted on account given an almost unique lesson in monof the want of timber. For the country umental coloring, but have also given is bare, a great part of it is covered a fresh impetus to that beautiful branch with shrubs, and produces nothing but of art, enamelled pottery. All of the roofs of last year's Exhibition building Now and then in London we see a at Paris were resplendent with color, vaulted church or a vaulted hall, but wholly due to the exhibition of those the greater part of our buildings are enamelled friezes. I do not grudge only walls with a wooden roof; even our gifted neighbors these well-earned St. Paul's would present us with the trophies, of which they have made so lantern on a limekiln if the wooden excellent a use, but we cannot forget dome were burnt, and the fall of the that it was the parsimony of our timber did not bring down the cone. Government that prevented us from Ware says "It is the roof that makes having them. Loftus began the excathe house," and it is pitiable to think vations in that very mound some thirtythat a fire would reduce nearly all our five years ago, and had to relinquish

I will, however, return to my subject, tions we simulate are built by us of and try and whet your appetites for lath and plaster. The great Ahmed-learning more about Byzantine archi-Ibn-Touloun showed his wisdom in tecture. Though the Byzantines had forcing his Coptic architect to build his become Christians, they by no means Mosque at Cairo of burnt brick, saying eschewed those sins which are dethat every other material perished by nounced under the names of the "lust fire or water. When we recollect what of the eye" and the "pride of life." architecture does for a country we When these sins were indulged in for ought to insist that our national build- ecclesiastical buildings, furniture, and ings should be built of burnt brick and dresses, they were supposed to be pevaulted with the same material, so that culiarly favored by Heaven. Procopius when our empire has passed away there tells us that Justinian having ordered a

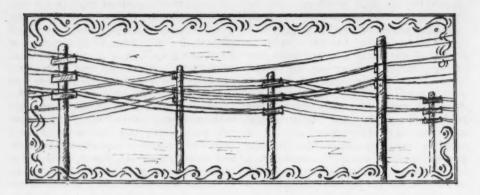
was then created. credible." adorned ancient temples not only in tistic regeneration. Rome, but in all the Roman provinces, had been stripped from them, and conchurches; glass mosaic was manufacstantinople there was no lack of silk. Procopius says in the Sanctuary of Santa Sophia alone there were 40,000 pounds weight of silver, of which the iconostasis and furniture were composed. And Paul the Silentiary says: "In the circular part under the great dome was the Ambo, which was built precious stones and ornaments in enand whole pearls, completed the decoration."

our study, we cannot be altogether in- throughout Christendom.

church to be built at Jerusalem, in different to those other fine arts which honor of the Virgin, required it to be so greatly add to its beauty and in-"surrounded on every side with col- terest; we must have some feeling of umns such as in beauty would be respect for the centre of an empire worthy of the main building, and of a which was so long a bulwark against size capable of supporting the weight barbarism, and for that seat of art and that would be laid upon them," but learning from which cultivation was from the precipitous character of the obtained: we can hardly expect archiplace such columns could not be brought tecture to be desired and appreciated there. He goes on to say that "while, by people who are wholly destitute of however, the Emperor was grieving at any feeling for the fine arts. Byzanthis difficulty, God pointed out, for this tium itself was a centre of all the arts, purpose, in the nearest mountains a and though they did not flourish there bed of stone of a kind suitable for this as perfectly as at Athens in the days of purpose, which either had existed there Pericles, nor even as they did at Rome in former times, and been concealed, or in the days of Augustus, yet the fine Either story is arts to a certain extent were there when And he tells us that these they were extinct in the West. At Bycolumns were "of a color that resem- zantium the traditions of antiquity were bles flame." In addition to this new at least kept up, and in this way it was marble every splendid marble that had able to sow elsewhere the seed of ar-

Byzantium supplied twelve thousand artisans for the construction of Walid veyed to Constantinople to enrich the the First's Mosque at Damascus between 708 and 718 A.D., and supplied tured there; gold and silver, precious him as well with the mosaic; it furgems, and costly stuffs were given to nished architects and artificers to the churches in profusion, and as the Charlemagne (771-814), and to Abd-silkworm had been introduced into Con-el-Rahman the First at Cordova (755-787). Subsequently it sent architects to design and superintend the building of St. Mark's at Venice, and probably these same architects built St. Front, at Perigueux, and to its arts we mainly owe the Cathedral of St. Trophime, at Arles, and St. Gilles.

It was for many centuries a barrier of the rarest marbles, enriched with against the devastation of the savages, and a bulwark against Mohammedan amelled gold. This tribune, big enough, invasion, until it was left to its fate for the consecration of the Emperors by the European nations through theowas crowned with a dome covered with logical hatred. To the learned men it plates of gold enriched with gems; a still cherished, to the codices of the great cross, ornamented with rubies ancient writers it preserved, and to the engraved gems, the bas-reliefs, and the statues it cherished, we mainly owe the I think I have already said enough great Renaissance of the fifteenth cenabout Byzantine architecture to interest tury, from which we are still reaping you in it, but I will say a few words the benefits, and from the escape of its more about Byzantium and the Byzan-scholars before its last throes we owe tine Empire. Though architecture is the knowledge and study of Greek



CROSS-CURRENTS.

by death, has now been added the terror of posthumous notoriety. The obituary writer, with his blank array of dates and facts, set in a frame of meaningless and indiscriminate praise, is a matter no more to be pleasantly contemplated by the wise man preparing for death than a smattering of dead flies in a pool of thin molasses; but the post-mortem raconteur is even more unpleasantly suggestive. If Manfred had been a living celebrity instead of the paper offspring of the "bilious Childe," never would he have said:

"Old man! 'tis not so hard to die."

Being an emotional hero, he might in a weak moment have anticipated, with something like pleasure, a few newspaper anecdotes about his wanderings through the Alps, and the various supernatural entities which enlivened his path; but even his love for attitudinizing would shrivel at the thought of being minced to make an American newspaper. No doubt, many men of reputation have something of the Manfred in them. Being in the eye of the public, unless their natures are very simple and sincere, they naturally fall into a habit of posing; but if at the same time they are sensible men, they know that too many postures and too liberal a publicity makes them absurd and common. While they live, they can so shape their lives and form their curiosity. It is bad enough to have one's biogra- peared to keen and perhaps fond observers;

O the many terrors proverbially possessed phy written by a sympathetic, intelligent and accurate friend, with access to all the available material, for even then it is really some other man that is delineated; but to have one's memory snatched up by a multitude of ignorant, careless, stupid and often malicious scribblers and hashed into unseasoned "copy," to have one's weakest driblets of conversation passed off as profound sayings or delightfully humorous tid-bits, to have one's most cherished and tenderest associations distortedly distributed to a heedless multitude-all that is profoundly obnoxious.

We need scarcely say that it is not the anecdotes and reminiscences that of themselves are objectionable. If properly told, they are far less objectionable than a set and formal biography, which is necessarily unsatisfactory. thoroughly sympathize with any author who throws what obstacles he can in the way of his prospective and inevitable biographer. The latter is nearly always wrecked between the danger of including too much and including too little; he may not tell everything he knows, and there is much which he does not know. A life cannot be written in black and white, not even by the man himself. On the other hand, reminiscences that really mean something, that betray some trait of character or include some shrewd saw told pleasantly and gracefully, may be as serviceable to the critic of the author's works as they are acquaintances as to keep the anecdote-seeker at delightful to his admirers. These reminiscences a safe distance; but death is a signal for a flood do not pretend to be more than momentarily of wickedly false or foolishly true reminiscences descriptive. They tell the tale of the man, not to be poured on a public greedy with baleful as he was, but simply as he occasionally apknow this is not to ask too much; more than on this side of the dividing line is all very well. this he has every right to reserve. Such reminiscences, with a plain account of the facts of his life, should be sufficient for both critic and admirer; his works, if they be well read, would tell the rest. For our part we should be glad to see all famous men follow the example of the pious Bishop Butler and destroy their private papers. Such a course would make their writings the more closely and fruitfully studied.

But the post-mortem story-teller often exercises no discrimination. He writes for a multi tude of people who know only the name of the corpse; and for a time anything with that posthumous mortality would be granted to such name in it finds a ready reading. Sometimes an one, for the newspapers are the graves, he has met the departed celebrity casually; as they are the creators of reputations; but even he can write in a tone of a personal acquaintance a few days of public existence would be someand include copious I's in the narrative; but as a rule his ammunition is all second-hand. He either misreads or garbles the authentic recollections of a personal friend, or he comes across some nonentity who has known the celebrity. The few formal words that the great man uttered, which were perhaps pleasantly turned, are given out as characteristic and pregnant sayings. But worst of all is the close and often indelicate scrutiny to which the details of his private life are subjected. for your indiscriminate post-mortem raconteur never knows, of course, what not to report. The effect of all this is often very unfortunate. Spurious anecdotes are circulated, false impressions created; and the only man who can put things straight is safely surrounded by dirt. Just because these reminiscences are so suggestive, so delightful, and frequently so instructive when they are judiciously, truthfully and sympathetically told, they become barren, absurd and tiresome when retailed by some blunderer or inconsequent.

It is to be hoped that the obituary writers and post-mortem raconteurs will retain their literary integrity. In the increasing specialization of newspaper work they will doubtless become largely, as they are now partially, a particular class; and when this time arrives they will possess a peculiar power and become very desirable associates-to men seeking notoriety on the other side of the grave. For this reason the proprietors of newspapers will be wise beyond their publications in resisting firmly any tendency to sign obituaries. A great many people are committing suicide nowadays for the apparent purpose of attracting public attention to their own precious personalities; and it is patent that the writer of facile death notices would be in great Correspondents must have found his letters

they illustrate his social personality. To ask to demand with such theatrical enthusiasts. Fame One can attain it by putting a great deal of "individuality" into a very little work, and then courting "literary" friends. How many people have been written into a reputation by others! But there is one drawback to this. A reputation has to be maintained, and is not consequently all It is frequently very difficult and somewhat trying to keep one's "literary" friends up to the proper writing point. Now a post-mortem reputation has no such abatement of its charm; and circussy suicides might very well attempt to attain it by similar methods. True, only a Let us be modest in longings for a thing. journalistic life after death.-Primus.

> That the biography of Richard Monekton Milnes, the first Lord Houghton, should be written by T, Wemyss Reid is perhaps more fortunate for the late lord than for the living author. No friend of Milnes need fear to trust the latter's memory to the former's account of his life. The book is pleasant reading from one end to the other; it makes one know the man (to a certain extent) and like him. Mr. Reid's success is, then, indubitable, and I should add it was no easy matter to dress up such a life for the public. There were so many points that needed explanation that the elements of a good showing were lacking. It follows that since Mr. Reid is always removing plausible misconceptions, the book is pervaded with an undeniable flavor of advocacy; but by this I do not mean to impeach his fairness. A case had to be made for much in Milnes' life; his biographer had much to carry. It was not a massive force, bearing all its littleness with ease, forever revealing its own strength and rejoicing in the revelation; it was not a simple, steadfast life, that reveals itself completely, firmly and quietly; it was, on the contrary, rather a mixed life, the current of which wandered deviously and as it were uncertainly over many fields-with great good to some and great waste.

> One result of this is that the contributions of Milnes to his own biography are not on the whole the most interesting parts thereof. His external associations formed such an important part of his life, that his story is told largely through them.

pleasant to receive; but he was not a good letter his time-as it has already been mentioned in that writer, and they do not contain very much charm for an outsider. Of incidents and actions there are few to be called prominent. In spite of any interest we may feel in the man, the parts of the book that read most pleasantly are the letters of his friends and the explanations of Mr. Reid; yet this statement, standing alone, would create a false impression. While the letters of his friends to him are interesting in themselves, and often eminently readable, yet the man to whom they are written is responsible for no small part of the interest and the charm. And Mr. Reid's explanations and additions, in excellent taste and happily worded though they are, derive interest mainly from their subject. Milnes gains a good deal by being presented to the reader mediately; because being something of a woman, he exerted his best influence through personal contact-on the few not on the many. He was probably the most indefatigable seeker after men of reputation and ability that his day and generation saw. People accused him of a mere vulgar curiosity, of being a hunter after celebrities; but there can be no doubt that the mainspring of his desire to meet clever people was an eager interest in them-in their ideas, in their work, and in their personalities; and that his mental vivacity helped to stimulate, and his mental hospitality to encourage many even of his most casual acquaint- different times well advertised in all of these ances. His manner was captivating and per- occupations. I have, however, no intention of vasive. Tennyson said that his presence in a under-estimating his public enterprises. This is room at once put everybody into a good humor; no time or place to put a careful value on them. and this tribute is a key to his excellences, his During his early years his poetry was very poppurse to; and by using his large social influence in their behalf, secured to them the start which subsequently led to success. The extent to which he endeared himself to literary England was fittingly displayed by the large number of published regrets which his death called forth-a number out of all proportion to his direct public

Yet it is obvious that if this best part of his life had been all there was of it, his biography would never have been written. A man whose nature is most fruitful through personal effect must be content to have his tale untold. If his friends be prominent men, his name may figure in their

of Carlyle and others. Such a record alone would, of course, be very incomplete; by far the larger number of his friends, acquaintances and dependents never will have their biographies written; and it is something of a pity for Milnes' sake that the England of the present century has not been an England of memoirs; for if it had, he assuredly would have been remembered through many pages. But there is really no way in which this incompleteness can be properly remedied. The life of a statesman, a general, a man of action of any kind tells itself with a reasonable degree of truth; the life of a poet, an artist, or a man of expression can be told plausibly, and we have his works to round off the tale; but a man of character, whose effects are exerted through personal contact—his life, although its influence may be as beneficial and its message may be as vital as those of the other two, can never be adequately delineated. We can get glimpses and suggestions, but that is all.

I may have seemed to go too far in saying this of a man of such diverse and multitudinous activities as Milnes-a man who apparently sought and certainly attained much publicity throughout something like fifty years-a man who was poet, statesman, diplomatist, wit, reformer, philanthropist amd scientist, and at peculiarities and his popularity. He helped ular, so much so that he was regarded as Tennyboth Tennyson and Swinburne to fame and son's most promising rival. Lately it has been influence by being the first to publish critical almost entirely neglected save by them who estimates of their works which recognized the knew something about the man; but if it did not fullness of the poetical genius of each. Others deserve its ephemeral popularity, competent he assisted by advice. Still others he opened his critics are agreed in asserting that it as little deserves its subsequent neglect. As one would imagine, there is a wonderfully wide chasm between his best efforts and his poorest, his inspiration frequently failed and he fell back on current affectations. Some few of his poems, however, ought to find a place in any anthology of the best English verse. As a member of Parliament, he was active, prominent and conscientious, but not very successful-largely because, though ordinarily he was a party man, his opinions were always formed independently, and often led to independent action. eagerly and peristently interested in many of the social reforms of his time; but the few with lives; and, no doubt, Milnes will receive men- which his name is particularly identified are not tion in the biographies of many famous men of of much importance. His social duties were of monthlies and weeklies. It is evident, how- integrity of purpose. ever, that every one of these occupations interfered with all the others; and for that should have left nothing permanent behind it is a or some deeper reason he was not in the front great pity; and, unfortunately, although we know rank either as a writer, a politician, a scholar, our loss, we cannot estimate our gain. For amid or anything else.

and any proper subordination of part thereto, hospitable, generous and stimulating nature of and effective. His disposition was mercurial and we can never tell how much his contemporaries altogether too easily discouraged. Nearly the owed to its action. If it was much, his life was no reluctantly agree with him. Every person whose in it."-Secundus.

the most varying and occupying description, aims are noble will feel when the time comes for for he was a generous entertainer and a fre- finally taking stock of his own position, that quent visitor. Besides all these interests he most of his objects remain unfulfilled, and conhad many smaller ones, such as bibliophilism, sequently he may call his life a failure, but in charities of various kinds, and essay-writing Milnes' case the failure was not primarily due to for the quarterly reviews and some of the stubborn circumstances, but to the want of any

That a nature so sound, so mature, and so rich the confusion of diverse aims-some trivial, some The fact was that Milnes' life lacked an end, halting, and nearly all conflicting-the sweet, He took no means of making his work peristent the man stands out with great distinctness; and whole of his poetical activity was included within failure whatever the result of his more immediately ten years of his younger life: during part of the practical aims, for the possibilities of effective insame time and for somewhat longer, he made a fluence by a fresh, persuasive and captivating specialty of continental politics and foreign affairs personality are boundless. In the necessary abgenerally, his purpose being to qualify himself sence, however, of any such knowledge, one can for a ministerial office. After a couple of dis- only regret the palpable loss. Here was a nature appointments, however, he utterly relinquished that seemed to be highly and richly adapted to that specific end and settled down as a kind of beneficent and successful achievement. Conliterary expert, social leader and political inde- tributions to its abounding life poured in from pendent. He still retained the keenest interest every source; but they gathered as in a great in the affairs of the day; but allied himself most lake, and instead of rushing out in some fit and actively with young and needy causes-the kind ample channel, were gradually evaporated or that would be most benefited by the assistance trickled away in a thousand little outlets. In of a person with his name and social influence. putting down his biography, one can only say In the end he naturally felt that his life had not with a sigh: "It was a good life, Would that been altogether a success, and an observer must mine might be as worthy. But there was pity



MEN WHO HAVE ASSISTED IN THE DEVELOPMENT OF ARCHITECTURAL RESOURCES.-No. 1.

JOHN B. CORNELL.

circumstances.

John B. Cornell, to whose energy and ability just south of Walker street, where now stands the

HE history of successful men teach import- Cornell; and they continued as partners until the ant lessons, and give encouragement to latter's death, which occurred in 1870. When those who are struggling amidst adverse Mr. Cornell commenced business it was in a small way, and in a modest building, on Centre street,



JOHN B. CORNELL.

schooling that boys received in those days, he the old firm, J. M. Cornell, son of John B. Cor-

the present condition of the iron trade (particularly large building which the firm in due course of in New York) is due in no small part, was born on time erected for their office purposes, and which Long Island, Feb. 7, 1821. After the ordinary is still occupied as the office by the successor of was placed with his elder brother, George, in nell, under the present title of J. B. & J. M. Cor-New York as an apprentice to learn the trade of nell. Business steadily increased with the young a worker in iron, in the manufacture of wrought- firm, and in 1856 additional adjoining lots were iron-doors, shutters, gratings, railings and other leased and an iron foundry erected. Greater iron work for buildings. Shortly after starting shop capacity was soon required, and in 1859 in business for himself, in 1847, when the archi- large foundries and fitting shops were built near tectural iron business was in its infancy, John B. the foot of West 26th street, that in the course of took into partnership his younger brother, Will- a few years spread out to cover some seventy full iam W., under the firm name of J. B. & W. W. city lots of ground, with a river frontage, the

buildings filled with all the best known appliances for working wrought iron and making castings.

The small foundry in Centre street was started principally to cast chilled iron for safe and bank vault work. In the manufacture of bank vaults the firm acquired an extended reputation. In those days the steel industry had no place in this country. Wrought iron I beams were not rolled here until 1860, and for years after that date 7-inch beams were the only size that could be had of American manufacture. Structural iron was nearly all imported from abroad. More pig iron was imported than was produced in this country. But a new industry was looming up in New York, that of cast-iron fronts for buildings. One-story iron front columns with rolling iron shutters had long been used. Entire fronts of cast iron was the natural sequence. Instead of stone ashler with an architrave around each window opening, as was the usual style of commercial buildings, came iron columns and arches and projecting cornices for the upper stories as well as for the first story, and at a cost far less than the same designs could be executed in stone. The Messrs. Cornell read correctly the signs of the times, and increased the size of their works to meet the public demand for iron fronts. The architects who had the largest practice were those who, like John Kellum and Griffith Thomas, designed the most in cast iron. The architectural iron industry was fortunate in receiving the early patronage of some of the most intelligent and best known of the large property-owners, such as the Harpers, A. T. Stewart, Peter Gilsey, the Goelets and others.

It is the province of the contractor or manufacturer to produce what the architect may design. Architectural critics have rarely had a good word to say in favor of cast-iron fronts. Their demand has been for such a treatment of an iron front that it will unmistakably bear the stamp of cast metal, and they blame designers of iron fronts for following outlines and proportions suitable to stone, insisting that an iron architecture should be invented, if none yet exists, one that will give an expressive treatment and an appropriate decoration to the material used. In architecture the recognition of permanency is one of the true principles of the art. A front must not only be strong enough, but it must possess an evident reserve of strength, which is the result of obvious abundance. A building should bear the impress of solidity, as though it were indeed a growth of the earth itself, and not of so fragile an appearance that the winds can blow it away.

In the initiatory steps for the manufacture of iron fronts a great deal of ingenuity and experiment were required. Mr. Cornell had much inventive skill, and the records of the Patent Office bear testimony to many ideas originated by him, such as his rolling shutter, his dove-tail sheet lath, and his double shell iron column, all of which have been extensively used.

A large mechanical establishment must be constantly and unremittingly kept supplied with work to make it profitable. There came stagnant times in building operations, and when work in other channels had to be sought out. Following the outbreak of the Civil War, the Messrs. Cornell built turrets for the Ericson monitors and other work for the Navy and War Departments of the Government. Later, when a dull spell occurred in 1876, the firm went into elevated railroad building for the New York, and afterwards for the Brooklyn companies.

A photographic view of A. T. Stewart's store building is given on the following page, by way of illustrating the magnitude and character of the Messrs. Cornell's manufacture. It is now thirty-two years since the first section of that store front was set up in place.

Stewart's store covers an entire block of ground bounded by Broadway, Ninth and Tenth streets and Fourth avenue, in size nearly 200 feet in width, by 328 feet as the greatest depth. Mr. Stewart was an enthusiastic advocate of cast-iron fronts for commercial structures, believing that the material had in its favor unequalled advantages of lightness, strength, durability, economy, incombustibility and ready renovation. His down-town store, at Broadway and Chambers street, was of marble above the first story, cumbrous and excluding light. His up-town store gave the ample light that this merchant had learned was so valuable for his business. In its dress of white paint, Mr. Stewart used often to liken his iron front to puffs of white clouds, arch upon arch, rising 85 feet above the sidewalk. When Mr. Stewart, in 1870, erected his Women's Home on Fourth avenue, Thirty-second and Thirty-third streets. a fire-proof structure, he adopted cast iron as the material for the fronts, and that without any desire to save in the first cost of what he generously intended should be a gift to the public. Mr. Stewart's architect was Mr. John Kellum. Another of Mr. Kellum's iron front buildings is that of Tiffany & Co., jewelers, Union square and Fifteenth street, also executed by the Messrs. Cornell.

John Kellum, Architect.

STEWART BUILDING,

The dry-goods store of Messrs. Arnold & Constable, Broadway, Nineteenth street and Fifth avenue, was built in two sections, the easterly portion first, with marble fronts above the first story, and the westerly portion next, fire-proof and with cast-iron fronts. The architect was Griffith Thomas, the contractors for the iron work, the Messrs. Cornell. Another of Mr. Thomas' iron fronts is that of the Domestic Sewing Machine Company, on the southwest corner Fourteenth street and Broadway, and made by the Messrs. Cornell.

Light, sunshine and pure air are modern innovations in business houses. The time was when bright and healthful surroundings were deemed incompatible with commercial thrift, and business was carried on in dingy, gas-lit cells. The old race of merchants and bankers lavished their gains on their residences, to which they escaped with all the zest such a contrast could give between home and office, but their clerks toiled on in sedentary labor, blanched in countenances and withered in forms. The time did come, however, when beauty, sunshine and health united in the environments of trade, and to the introduction of cast-iron fronts is the wonderful change primarily due.

The process of manufacturing an iron front is interesting in every stage, from the time when the architect's small scale elevations are received until the finishing coat is put on the work set up in place. Large scale drawings are made, followed by full-size drawings of the principal parts. Then the patterns are prepared. In the foundry the pieces are moulded in sand and the castings made. Cleaning, chipping and filing next follow. The ends of the cast columns are cut off true and smooth in a double-ended rotary facing machine, In the fitting shop the columns are laid on their backs, spaced the right distance apart, bolted together story upon story. The light castings, the arches, the soffits, the sills, the ornaments, fast. Lying on the floor the iron front is thus put together in all its parts. A surface coat of mark each piece so that it can be put back in its the opposite surfaces of the light castings. The The making of iron fronts is only one branch of enterprise.

the general manufacture of iron-work for buildings, which includes forging, blacksmithing, punching, drilling, planing, rivetting.

It is somewhat difficult to speak of John B. Cornell without linking in the same sentence the name of his brother, William W., in the praise that both are entitled to in organizing, systematizing, and conducting so vast and complicated a manufacturing business, and creating a new industry. Both were men of discernment, energetic and progressive. Both commanded the respect of their fellow citizens, to which their well-tried integrity and upright course entitled them. Their views were alike in many respects. In religious beliefs both were earnest members of the Methodist Episcopal Church, to which they made large contributions. In William's death the Methodists lost one of their most active and liberal members.

When the manufacturers of architectural ironwork in New York and vicinity organized into an association to advance the best interest of their trade, Mr. John B. Cornell was elected president thereof, a position which he continued to hold until his death. When the constitution of that society was being drafted, Mr. Cornell insisted that it should recite that the society should neither fix wages nor selling prices; that each and every member should be entirely free to employ whomsoever he saw fit, and for whatever he should deem best, and to sell his manufactured products and wares at any price and on any terms he pleased; and that in no way and at no time should individual liberty be abridged or restricted by society action. This declaration of principles discloses Mr. Cornell's love for fairness and freedom in business transactions. The respect and esteem of his fellow iron manufacturers is shown in his repeated re-election as president of the society over which he continuously presided for many years.

Mr. Cornell long resided, prior to his death, are all fitted in their place and bolted or secured on the nortwest corner of Fifth avenue and Forty-fourth street. The house was recently altered in the lower stories, and is now occupied oxide of iron paint is given to the work. The by the Fifth Avenue Bank. Mr. Cornell died parts are then separated, care being taken to October 26, 1887. The memorial resolutions adopted by the Society of Architectural Iron proper place. All surfaces that the first coat of Manufacturers declares that his career illustrates paint did not cover are now painted, including how a man can be a true christian, a patriotic citizen and a just employer. The history of his parts are laid aside in an orderly manner, until life does indeed present an encouraging example the building is ready to have the front set up. of success by straightforward and legitimate



THE NEW EDITION OF FERGUSSON.

History of the Modern Styles of Architecture. By James Fergusson, D.C.L., F.R.S., etc. Third Edition. Revised by Robert Kerr, Architect, F.R.I.B.A., etc. In Two Volumes. With Illustrations, New York: Dodd, Mead & Co. 1890.

To the student of architecture, Fergusson's works, however unsatisfactory they may be, are indispensable. No other author has so nearly covered the whole field, or produced a book for popular reading in which the history of architecture is so well presented. This is as true of his "History of the Modern Styles" as of his general "History" and of his "History of Indian and Eastern Architecture." Not one of these is satisfactory, as we have intimated, and yet there is no other book that covers the same ground. His books on ancient architecture are unsatisfactory in great part by reason of his proneness to indulge in fantastic "restorations" for which better instructed archæologists find no warrant, and which indicate rather what he thought ought to have been done than what in fact was done. A French archæologist observed of his restoration of the Erechtheum that "nothing whatever exists to support these suppositions." An American architect observed of his theory of the method in which the Greek temples were lighted: "That is the way in which Fergusson would have done it, but it is not the way in which a Greek architect would have done it." Mr. Fergusson, indeed, enjoys the unique distinction of having produced a standard work upon a subject upon which nobody regards him as an authority. In Indian architecture he is, indeed, an authority, and even the authority, but that is only because there is no other. It is an illustration of the general ignorance and incuriosity of Anglo-Indians touching the country been almost the only Englishman resident in India who has paid systematic attention to the

In the body of his history Mr. Fergusson's defects are a general lack of perception of the subtleties of architectural art, and a tendency to dogmatize from rules of his own creation, which are commonly founded not in the nature of things but only in the nature of Fergusson. His account of Gothic art is moreover in a great measure vitiated by his individual dislike of it in comparison with antique architecture. This constitutes a personal equation which he could not allow for, because it seems that men are born Romanticists or Classicists, as they are born with black hair or red. This dislike appears, not only in his preference for other modes of building, but also in his preference, among buildings of the Gothic period, for those which are least Gothic. This cooperates with his patriotism to make him overestimate most absurdly the value of English Gothic in comparison with that of France or even with that of Germany, and to praise the English architects for their superiority in various points, when, as Mr. Moore has lately shown, what he is really praising them for is for not understanding the French Gothic they attempted to domesticate. On these accounts and on others, he is a very unsafe guide, and yet, as we say, his books are indispensable. They are indispensable by reason of the extent of the field they cover, and especially by reason of the range and number of the illustrations, and the judgment with which the subjects of these are chosen. So that, to the reader who reasons upon what he reads, Mr. Fergusson they govern that Mr. Fergusson should have ordinarily supplies the means for refuting him-

The "History of the Modern Styles" is as monuments of the former possessors of the land. valuable as his other books, in the respects in the respects in which they are weak. In any merely of the achievements of the better of our case, a work on modern architecture that is twenty architects, but also of the aims and tendencies needs no revision, and not very much extension. There has been no architectural revolution, nor even an architectural "movement" since his book was written, but only the addition of new examples to a well understood and universally practiced style. Of the works of this style, too, Mr. Fergusson was an impartial if not a highly discriminating critic. All that was needed for this part of the book was the addition of the most striking examples that have been furnished since Mr. Fergusson's time, and an occasional correction of his eccentricities. The examples have been chosen with excellent judgment, for the new Hôtel de Ville and the Faculty of Medicine in Paris, the library in Marseilles, and the Palais de Justice in Brussels, with the street fronts from Berlin and Vienna, are nearly all admirable and are all highly typical buildings.

It is in the treatment of English and American architecture that the book needed to be revised and even castigated as well as modernized. Fergusson's account of architecture in the United States is disgracefully incompetent and ignorant, as well as contemptuous. It is true he wrote in 1873, but in 1873 Trinity Church was nearly thirty years old, and photography was available. Fancy describing "Calvary Church" and "the Church of the Holy Redeemer in Third street" York, even at that time, and referring for au- cal. cent Architecture in the United States," which furnishing the means for his own refutation.

which they are valuable; but it is even weaker in is very well informed and highly appreciative, not years old would stand in need of revision; and manifested in their works. The influence of the latest edition of Fergusson before that under Richardson, which is the most conspicuous fact notice bears the date of 1873. His account of in our recent architecture, is recognized and modern architecture on the Continent of Europe traced to its true source, and Richardson's own work is very fairly estimated. The examples chosen for illustration are selected with reasonable skill. If the selection is not such as would be made by a traveler of Professor Kerr's perspicuity from an observation of the buildings themselves, it is a highly creditable selection to have been made by a foreign critic from such sources as were accessible to him at home. The chapter on American architecture will repay a careful perusal by all readers who are interested in its subject. Of course they will wish it were longer and more exhaustive, but that is a desideratum that can be supplied only by a history of American architecture for American readers, a work for which the time seems now to be ripe.

The other blot upon Fergusson's book is his account of the English Gothic revival, and this is perhaps even less excusable, since his material was abundant and easily accessible. He erred here willfully and through the violence of his prejudice. Nobody could imagine from his account of the revival that it had enlisted the enthusiastic efforts of a number of able and disciplined artists, who made a great mark in the history of English architecture. His treatment of these men and their work is outrageously peevish and contemptuous, and his selection of illusas among the most creditable buildings in New trations of their work seems to have been satiri-His editor, without directly contradicting thority as to what was going on to "some recent him, has managed to give a fair account of the paragraphs in American papers!" The publish- movement which Fergusson travestied, and to ers would have done honor to Fergusson's furnish it with suitable illustrations. The reader memory by destroying the plates which bear of Fergusson's book who reads it for the first witness to an ignorance that is certainly careless time in this edition is much to be congratulated if not willful, and employing the editor to treat if he be a reader who takes his opinions from his the whole subject anew. This he has, to be sure, author without question; and upon these two virtually done in an additional chapter on "Re- subjects Fergusson did not pursue his custom of



RAYMOND LEE.

CHAPTER III.

FIFTEEN YEARS LATER — THE GUESTS WHICH THE STORM SENT.

"MOTHER, why do you watch me so?"
"Because I love you, Raymond. Oh, never mind the weather; come here to me, sit on this stool and put your head on my lap."

Mrs. Lee said this, and when her son was seated beside her, she ran her fingers caressingly through his locks.

"God bless thee, my boy."

The mother filled those words with every tone of all within the harmony of love. Naturally affectionate and sympathetic though Raymond Lee was, the deeper notes of this music were inaudible to him. Very few in youth have ears attuned to it. The capacity to appreciate it comes to us later in life—with some other things. Then, alas, too often we can awaken but the echo of the music. Raymond, years afterwards, in thinking of these early days, recalled the old fable which tells of the bad fairy who endeavored to turn to clay the wealth in a certain great king's palace, and succeeded with the crown, which was his ambition; the sceptre, which was his power; the diamond, which was his fame; the opal with its iridescent depths, which was his hopes and dreams; all were changed to dross save a certain little golden casket wherein was his mother's love.

" Mother?"

"What is it, Raymond?"

"Won't you let me have that boat?"

"Don't ask me, Raymond; I fear "

"But I'll be careful, mother. I'll tell you what I'll do: I'll never go out in it unless you say yes."

"Even then, Raymond, something might happen. Oh that gust, how it shook the house; this is an awful storm."

"But, mother, nothing can happen; besides, Joe Slagg says...."

"What is it Joe Slagg says?"

"He says (this with much hesitation) that I am a woman's boy, and the sea would make a man of me. He says the sea does not love a weakling or a coward."

"I wish Mr. Slagg would mind his own business; he's a fool."

A pause followed. Mother and son were busy with their thoughts which with both moved in the same direction.

"Am I a woman's boy, mother?"

"You are your mother's boy, Raymond."

" Is there any difference?"

"Raymond, dear, don't; you pain me. Do you want to grieve your poor old mother? There, there now, I knew it. Play me something—sing to me."

"Heigh-ho, the lowering skies,
The black clouds over the sea,
And by and by the storm will arise,
Bringing a message to me."

"Oh, my boy, God has given you a heavenly voice."

"Why do you cry, mother?"

"Because it is sweet to do so. You touch something hidden."

"What is it, mother?"

No answer was given to this question.

"Mother, when is Mr. Fargus coming again. It is nearly three months since he was here."

"You love him, don't you, Raymond? He is a good man."

"Oh, yes, he is kind to me, but I like him to come because you feed him as though he was an old red-faced cardinal—that's what Kate says—and I go halves with him."

"Gourmand, come here."

"In a minute; let me watch the clouds. Whew, look how the wind is blowing them. The sea must be fine. Mother?"

"What, dear?"

"Would you mind if I ran down to the beach, only for a minute or two? I won't be long."

"Restless one, I believe the sea has charmed you. Go if you want to, but don't be long. Wrap up."

The last words were spoken to the air. The mother watched her son running down the street bending against the wind.

"Oh," she sighed, "can I keep thee, Raymond, my boy."
She resumed her work. The cotton took form from the point of her crochet needle, but I doubt if an answer to her question shaped itself so easily.

The hurricane which Raymond faced when he left the cottage even yet is not quite forgotten on the South coast. Those who remember it always speak of it as the "Great Storm." The wind blew in mighty gusts which smote the earth. Great banks of gray clouds scurried across the heavens. The rain fell in torrents. It was a day in which the strong soul delights. The fury of the storm was intoxicating; wild emotions stirred the pulse to an unwonted measure, and something of the passion of the mighty tumult passed into the veins and forced to the lips a cry of wild exultation. Raymond felt these sensations when he stood on the cliff-top, and steadying himself against a part of the old ruins, looked seaward. The evening light was fading. The gray waves and the gray clouds mingled, mingled in mist and foam, and were scarcely distinguishable one from the other. Suddenly a very faint reddish light flashed far out from land. So faint was it that Raymond might have mistrusted his eyes had not the roar of the storm a second or two later taken, for an instant, a sharper accent. Immediately afterwards he saw what was like a star shine forth for a moment and then go out. Raymond trembled at the sight. So great was his excitement that he tried to utter a cry, but the roar of the storm stifled it in his very teeth. He started at a run for the village. On his way he was blown down twice. To shorten the road he scrambled over walls and made through the gardens of some of the cottages, and thence down the steep winding cliff-road to the coast-guards' station on the beach. He hammered the low door of the building with his fists, and it was flung open by a man in a "sou'wester." It was Joe Marley.

"Oh, Joe, there's a vessel sinking off the Monastery Cliff."

"Off the Monastery Cliff, Raymond!" exclaimed the man.

"I was up there and heard a gun."

Accompanied by three other men and Raymond, Joe Marley hurried out of the station—up to within a few feet of which the great waves were dashing—and shading his eyes with his hand, as though a better vision were gained thereby, peered seaward. The sharpest eye could then distinguish nothing but the turbulent confusion of the sea and the sky. For the space of some minutes the men listened intently.

"Up the cliff, boys," cried Joe Marley. "Two of you get out the gun. We'll see if they hear us."

Marley, with Raymond and another coast-guard at his side, stationed himself at the top of the cliff. Word had passed through the village that a ship was foundering off the coast, and a small crowd soon collected around the three.

"Where is she?" asked several voices.

"Off there," cried Raymond, pointing to where he had seen the light; but nothing was visible there then. After a minute or two Tom Burroughs asked, "Are you sure you heard a gun?"

"Aye, aye," said several, as if approving of the doubt.

"I am sure," said Raymond positively, "and I saw a rocket too."

"You did, eh?" said Joe Slagg, nodding his head. "I wouldn't give much for her chances, then. It was a night like this when the Polly went down, nigh on twenty years ago."

"Oh," said a bystander, blowing the rain from his beard, "this is worse than that. We got the boat out then, but yer couldn't do it to-night."

The boom of the gun sounded from the beach below, but how faintly!

"They won't hear that," said Marley shortly, shaking his head. "The wind will kill it."

The words were barely uttered when the men at the station sent up a rocket. It rose scarcely a hundred feet, and fell without breaking. In the next lull in the storm another rocket went up, and this sent a golden shower of light high over the land. The little crowd cheered, and then every eye and ear were strained to catch an answer from the sea. The minutes passed, and none came.

"You are mistaken, my boy," said Joe Marley quietly, "or she's gone down."

"Then down she's gone," said Raymond, "for I've made no mistake, John. Hark! There's a gun."

Every soul thrilled at the sound.

"There's another," cried half a dozen voices, as another and more distinct report was heard.

"To the boat, boys," cried Marley.

The crowd of men, women and children hurried down the cliff to the station. The life-boat was speedily run out on its carriage to the water's edge where the sea foam washed around it.

"It's no use," said an old gray-bearded man approaching Marley who with the rest of the boat's crew was putting on a cork jacket. "You can't do it, Joe."

"John, let me go with you?" Raymond asked, seizing the seaman's hand.

"You, Raymond!" said Marley, putting the boy aside.
"No, no, this is no trip for you. Out with her boys."

"You'll take their lives, Joe," said the gray-bearded man, "if you launch that boat. I don't think you can, though."

But the boat was launched. Joe Marley stood in the stern, his body thrown forward, his weight upon the tiller-ropes. As a great sea rolled in he cried to those on shore and the life-boat slid off the carriage into the wave as it receded and was swept out to the black seething water beyond. An incoming wave broke completely over it, but the power of a dozen strong arms was on the oars. For a second the white hull was visible, wavering in the billows.

Another instant and it had passed from sight into the darkness.

"God is with them," said the gray-bearded man, "or they never could have done it."

The fisher folk were still peering into the darkness seaward after the life-boat, when Mrs. Lee, with a black shawl tied about her head, pushed in among them. Zipcy accompanied her.

"Where is Raymond? Where is my boy?" she cried.

"He was here a minute or two ago," said Tom Burroughs, looking around. "He wanted to go in the boat, but Marley wouldn't let him. He told him to go home."

"But he did not," cried Mrs. Lee, greatly alarmed and on the point of tears. "He is not in the village."

"Pr'aps he's on the Monastery Cliff," suggested one of the coast-guards, "where he was when he heard the gun. It was him as brought us the news."

"Yes, yes," said Mrs. Lee eagerly. "Will some one go and see for me? Oh, Raymond, Raymond, where are you?"

"I'll go, ma'am," said a tall boy in the crowd.

"Who's that?" asked Mrs. Lee, for it was too dark to distinguish faces.

"Will Perry, ma'am," said the lad.

"Good boy," said Mrs. Lee, "be quick. Hurry, hurry. I'll pay you well. Oh, Mr. Burroughs," she cried, as the lad set out, "could—could—do you think anything could have happened to Raymond? Oh, those waves."

"No, no, ma'am, no danger of that," said the fisherman.

"It may be," said the gray-bearded man slowly, "he's in the boat."

"How could he be there?" said Mrs. Lee, fighting the suggestion. "Surely, surely, you wouldn't let him go?"

"No, ma'am, of course not," said the gray-bearded man, apologetically, "but I was thinking, you know, may be he slipped in. He wanted to go so."

A few minutes later the boy who had gone to the South Cliff returned and reported that although he had searched everywhere and called aloud, he could not discover any one. Mrs. Lee burst into tears and wailed in a piteous way. Zipcy and the fishermen tried to reassure her in an awkward but not unsympathetic way.

"Don't take on so, ma'am," said the gray-bearded man. "Mark my word he's in the boat. I feel it in my bones he's in the boat. Don't you think you had better get out of the damp. Come to the station and wait. The boat can't be back for some time yet."

"Will it come back? will it come back?" cried Mrs. Lee. She knelt down on the beach and cried aloud: "Oh, Christ, give me back my boy." She fell forward prone upon her

face, sobbing piteously.

"Come ma'am, come, said the gray-bearded man softly, as he lifted her to her feet. "Here, Burroughs, give a hand; take her other arm." And the two men almost carried the woman to the coast-guards' station. There they placed her on a bench before the fire, where she sat, in a half-comatose condition, sobbing. Every voice or new sound outside made her start and listen.

Two hours passed, solemn, anxious hours for the watchers ashore, then doubt, dark as the storm itself, filled every heart. Would the life-boat return? Fear created fantasies, and amid the howling of the wind and the sea many thought they heard shrill cries from afar out on the waters. Another hour had nearly passed when a cry, this time distinctly audible, rose from the sea, and in another minute the life-boat was seen rushing shoreward on the white crest of an enormous wave which carried it high upon the beach. As the keel grounded the fisher-folk sent up a mighty cheer. Mrs. Lee heard it, and without shawl or bonnet flew along the strand.

"Where is my boy," she cried, seizing Joe Marley, who had bounded ashore, followed by the crew, to assist in haul-

ing the boat out of reach of the waves.

"Safe," was the reply given in a husky voice, for Joe Marley was putting forth the last effort of his strength. "He's astern with a little gal,"

"Thank God," exclaimed Mrs. Lee.

"All of us should say that," said Joe Marley. "Give a hand bo"

The strong man was completely exhausted. He tottered and fell to the ground.

Tom Burroughs and half-a-dozen others scrambled into the life-boat to help out the rescued. The first to disembark were three seamen, whose blanched and haggard faces told of the fearful struggle they had undergone. Afterwards two women were carried out, and Tom Burroughs followed, bearing a young girl who seemed to have fallen asleep in his arms. Then Raymond Lee dropped over the side of the boat. Mrs. Lee uttered a cry and ran to him.

"Oh, Raymond, Raymond," she sobbed, with her arms around him as she covered his face with kisses.

"There, mother, there; I'm all right. Take care, I am wetting you through. Oh, that was a sail! I wonder where the fat man in the dressing gown is. He's got a nigger with him who's nearly turned white. His daughter fell into the water."

"Oh, Raymond, whose daughter?"

"The dressing-gown man's. She isn't drowned. Marley fished here out. There she is. Tom Burroughs has got her. Oh, there's the fat man, mother. Look at him, look at him. He's climbing over the wrong side of the boat."

"Come home, Raymond, you are excited—and, my boy, you are drenched to the skin."

"That's nothing. Just a minute, mother, let me give the fat man a hand. Hie up there, the ladder's on the other side."

"Damn the ladder! Ugh! my feet are too short."

"Don't go back. Step on my shoulders. In the lexicon of youth, etc."

"You can't hold me."

"Never mind. I can break your fall. There. Easy—easy. That's better than breaking your neck, sir, isn't it?"

"Whoever you are, my lad, I thank you. Where is my daughter? Have you seen her?"

"That's she, isn't it? lying on the beach over by that man."

"Yes, yes.... My darling, you are better, eh? Thank God. Oh, how cold your hands are. Give them both to me. Where are we, my good fellow? Where's the town? How can I get to the hotel?"

"There's only the 'pub,' sir," said a sailor, "the Ship."

The name was ominous. The fat man shivered.

"You had better come home with us, sir," said Raymond, "eh, mother?"

"Certainly, dear, certainly. I shall be very glad in a time like this if the gentleman and his daughter...."

The fat man made a low obeisance.

"Madam, you are very kind. My helplessness must be my excuse for any intrusion."

"Come on, sir," cried Raymond, setting out. "If you will go ahead with mother Tom and I will carry Miss...."
"Pilgrim," said the gentleman.

To be continued.

